PB90-153701

Superfund Record of Decision (EPA Region 2)
Chemical Insecticide, Middlesex County, NJ
(First Remedial Action), September 1989

(U.S.) Environmental Protection Agency, Washington, DC

29 Sep 89

U.S. Department of Commerce
National Technical Information Service
NTIS

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. EPA/ROD/R02-89/098	2.	3. Recipient's Accession No. PB 90 153701/AS
4. Title and Subtitle SUPERFUND RECORD OF DECISION Chemical Insecticide, NJ First Remedial Action			5. Report Date 09/29/89 6.
7. Author(s)			8. Performing Organization Rept. No.
9. Performing Orgainization Name and Address			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address U.S. Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460			13. Type of Report & Period Covered 800/000 14.
15. Supplementary Notes			

16. Abstract (Limit: 200 words)

The Chemical Insecticide site is part of a 94-acre industrial development in Edison, Middlesex County, New Jersey. From 1958 to 1970 Chemical Insecticide Corporation (CIC) produced and stored pesticide formulations at the property resulting in soil, surface water, and ground water contamination. The site is currently vacant and consists of the remaining building foundations, asphalt roadways, a one-acre wetlands area, and a surface water drainage ditch bordering the site to the east, which ultimately drains into the Raritan River. Between 1966 and 1969 CIC was ordered by the city to close onsite lagoons, dispose of leaking drums, and stop wastewater discharge. Subsequent RI/FS investigations revealed the extreme complexity of the site due to the number and variety of contaminants (herbicides, pesticides, and metals) and the physical characteristics of the site. EPA performed two response actions to address concerns over high levels of contamination in the drainage ditch. First, in February 1988, EPA installed a fence to limit access to the ditch. The second action occurred in March 1989 when the ditch overflowed and EPA responded by removing contaminated surface water run-off that had collected in a parking lot onsite, and repairing the ditch to prevent future overflow incidents. This operable unit represents an interim remedial action to address contaminated surface water run-off from the site until the source of contamination, the soil, is remediated. Future operable units will address contaminated soil and ground

(See Attached Sheet)

17. Document Analysis a. Descriptors

Record of Decision - Chemical Insecticide, NJ
First Remedial Action
Contaminated Media: sw
Key Contaminants: organics (pesticides), metals (arsenic)

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages 84
	20. Security Class (This Page) None	22. Price A05

(See ANSI-Z39.18) *See Instructions on Reverse*

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

EPA/ROD/R02-89/098
Chemical Insecticide, NJ
First Remedial Action

16. Abstract (continued)

water. The primary contaminants of concern in the soil which may affect the surface water are organics including pesticides, and metals including arsenic.

The selected remedial action for this site includes clearing and grading the site; covering the entire site with an impermeable surficial cap; constructing a surface water run-off diversion system; controlling the release of collected, uncontaminated surface water run-off from the site; and surface water monitoring. The estimated present worth cost for this remedial action is $1,420,211, which includes annual O&M costs of $37,184.

PB90-153701

United States
Environmental Protection
Agency

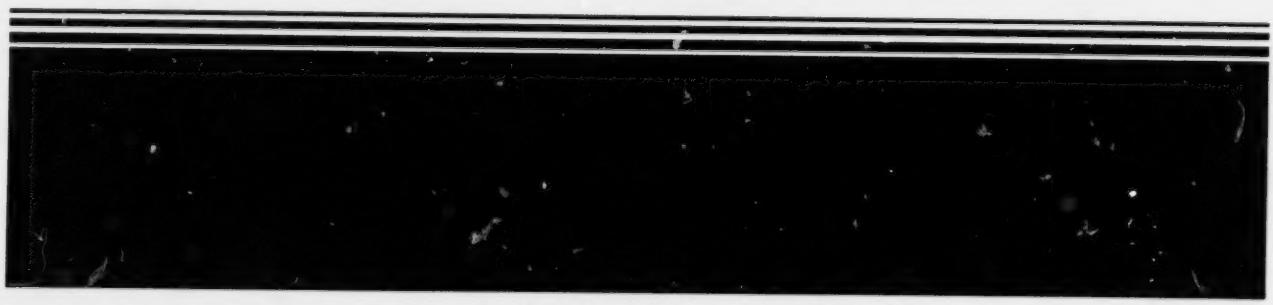
Office of
Emergency and
Remedial Response

EPA/ROD/R02-89/098
September 1989

EPA

Superfund Record of Decision:

Chemical Insecticide, NJ



REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA. 22161

N O T I C E

THIS DOCUMENT HAS BEEN REPRODUCED FROM THE BEST COPY FURNISHED US BY THE SPONSORING AGENCY. ALTHOUGH IT IS RECOGNIZED THAT CERTAIN PORTIONS ARE ILLEGIBLE, IT IS BEING RELEASED IN THE INTEREST OF MAKING AVAILABLE AS MUCH INFORMATION AS POSSIBLE.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

Declaration for the Record of Decision

Chemical Insecticide Corporation Site
Edison Township, Middlesex County, New Jersey

Statement of Basis and Purpose

This decision document presents the selected interim remedial action for the Chemical Insecticide Corporation site, in Edison Township, Middlesex County, New Jersey, which was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision document explains the factual and legal basis for selecting the remedy for this site.

The New Jersey Department of Environmental Protection concurs with the selected remedy. The information supporting this remedial action decision is contained in the administrative record for this site.

Assessment of the Site

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Record of Decision (ROD), may present an imminent and substantial endangerment to public health, welfare, or the environment.

Description of the Selected Remedy

This ROD addresses the first operable unit for the site. This operable unit is limited to addressing the problem of contaminated surface water run-off which drains from the site following heavy precipitation events. Other problems at the site, including contaminated soil and groundwater, will be addressed by one or more future operable units following the performance of planned treatability studies. The selected remedy is considered to be an interim remedy because the planned future remediation of the contaminated soil at the site would remedy the surface run-off contamination problem by addressing the soil which is the source of the surface water contamination.

The major components of the selected remedy include the following:

- Site Grading
- Surficial Capping
- Controlled Release of Uncontaminated Run-off

Additional details and discussion of the selected remedy are found in the Decision Summary for this Record of Decision.

Declaration of Statutory Determinations

The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This interim remedy utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable for this operable unit. This interim remedy does not satisfy the statutory preference for treatment as a principal element. Remedial alternatives which utilize treatment technologies to control the surface run-off from the site were determined to be less protective than the selected remedy and, therefore, were not selected.

This remedy will result in hazardous substances remaining on the site above health-based levels. A future ROD is planned for a subsequent operable unit to address those remaining hazardous substances. The need for five-year reviews to ensure that the remedy remains adequately protective of human health and the environment, as required by Section 121 (c) of CERCLA, will be dependent on the levels of hazardous substances which will remain at the site following the implementation of that future ROD.

William J. Muszynski
Acting Regional Administrator
U.S. Environmental Protection Agency
Region II

9-28-89
Date

Decision Summary for the Record of Decision

1. Site Name, Location, and Description

Chemical Insecticide Corporation (CIC) owned and operated the property located at 30 Whitman Avenue in Edison, New Jersey from 1958 to 1970, manufacturing and formulating a variety of pesticide products. The CIC property (i.e. the property formerly owned and operated by CIC) is bordered on the north by Route 287 and on the east, west and south by industrial properties. As used in this Record of Decision (ROD), the "Chemical Insecticide Corporation Site", the "CIC Site" or "the site" means the CIC property as well as the power line easement area located along the eastern boundary of the CIC property. The site is shown in Exhibits 1 and 2. (These exhibits and all other exhibits are presented at the end of this ROD Decision Summary.)

The CIC property is currently vacant, but does contain remnant structures (e.g. building foundations and asphalt roadways) from the pesticides manufacturing facility which once stood there. Wetlands constitute approximately one acre of the CIC property, which contains vegetation such as switchgrass, rushes and reeds. A strip of property which is approximately 20 feet wide and is located east of the CIC property contains Public Service Electric and Gas (PSE&G) electric power lines. Metroplex Corporation has granted an easement to PSE&G for the maintenance of the power lines. Both the CIC property and the easement area are fenced to restrict access.

The site is located in a 94 acre industrial development, however, there are residential developments to the north and west of the site. Approximately 2,870 residents live within a one-half mile radius of the site. Within one, two and three miles of the site, there are approximately 10,640, 37,720 and 76,700 residents, respectively.

There are no permanent surface water bodies on the CIC Site. After heavy precipitation, the surface water run-off drains toward the east to the drainage ditch located on the power line easement. The drainage ditch empties into an underground conduit which flows into an unnamed tributary of Mill Brook. Mill Brook, in turn, flows into the Raritan River (refer to Exhibit 2 for a map showing the drainage from the site) approximately four miles downstream of the site. None of these water bodies are used as a drinking water source downstream of the site.

The shallow groundwater in the vicinity of the site generally flows toward the east. Groundwater is not used as a drinking water supply in the immediate vicinity of the site. The nearest drinking water well is a private well which is located some 3,200 feet northwest of the site.

2. Site History and Enforcement Activities

Over the period that Chemical Insecticide Corporation occupied the property at 30 Whitman Avenue in Edison, NJ (1958-1970), various pesticide formulations were produced and stored on the property. Over the period of CIC operations, the Edison Department of Health and Human Resources (EDHHR) became concerned with activities on the site due to numerous neighborhood complaints of site odors, documented off-site discharges and releases, and the frequency of on-site fires. EDHHR ordered cessation of discharges of wastewater (1966 and 1969), oversaw the disposal of leaking drums to eliminate an odor problem (1966), and required the closing of on-site lagoons (1966). CIC declared bankruptcy in 1970. The property was purchased in anticipation of future development by Piscataway Associates, which demolished the production facilities on the site (1975), leaving the concrete building foundations and asphalt roadways.

Triggered primarily by the potential for the presence of dioxin (a contami-nant generated in the production of 2,4,5-trichlorophenoxyacetic acid, an herbicide which was handled on the premises), both NJDEP and EPA performed on-site and off-site field investigations at the CIC site, testing soils and surface water for dioxin (1983). In 1984, NJDEP further sampled on-site soils for the presence of other pollutants.

Based upon the analytical results from these investigations, EPA Region II authorized a remedial investigation and feasibility study (RI/FS) for the site. On-site and off-site RI field investigations were performed over the period July 1987 through March 1988.

Concurrent with the RI/FS work, EPA conduc ed two response actions at the site. In February of 1988 after discovering high levels of contamination in the drainage ditch located in the power line easement area east of the CIC property, EPA installed a fence to limit access to the drainage ditch. (The CIC property was already surrounded by a fence at that time.) In March of 1989 the drainage ditch overflowed into the parking lot of the Metroplex property. EPA responded by improving the drainage ditch to prevent overflows and by removing the contaminated surface water run-off from the parking lot.

Since the Chemical Insecticide Corporation is no longer in existence, EPA has not been able to take enforcement action against CIC for the problems caused by the company. However, EPA has

notified Mr. Arnold M. Livingston, who was the president of CIC, of his potential liability with respect to the site.

3. Highlights of Community Participation

The RI/FS Report and the Proposed Plan for the CIC site were released to the public for comment on August 3, 1989. These two documents were made available to the public in the administrative record repositories maintained at the EPA Region II office located at 26 Federal Plaza, New York, New York and at the Edison Township Municipal Complex. A notice of availability for these two documents was published in the New Brunswick Home News on August 3, 1989. A public comment period on the documents was held from August 3 to September 8, 1989. In addition, a public meeting was held on August 10, 1989. At this meeting, representatives of EPA and of EPA's contractor, Ebasco Services, answered questions about problems at the site and the remedial alternatives under consideration. A response to the comments received during this period is included in the Responsiveness Summary, which is part of this ROD.

4. Scope and Role of this Operable Unit

The CIC site, as characterized by the RI field investigations, is extremely complex, due to the number and variety of contaminants present, the concentrations of contaminants documented, and the physical and geological characteristics of the site. The specific combination of chemical contaminants at the CIC site (herbicides, pesticides and metals) will require performance of treatability tests prior to identification of alternatives to remedy the entire site. Preparation of an FS report which addresses all aspects of the CIC site requires performance of the proposed treatability tests and assessment of the results. Such treatability tests are in the planning stage.

EPA has already taken two limited response actions related to the surface water run-off problem at the site. The first action in February of 1988 was to install a fence to prevent access to the contaminated liquids and sediments in the drainage ditch east of the CIC property. The second action in March of 1989 was to clean up the overflow from the drainage ditch to the Metroplex parking lot and to improve the ditch to reduce the likelihood of future overflows. The surface water run-off during this overflow incident had a yellow color that is characteristic of standing water at the southern end of the CIC property. This yellow color is attributed to dinoseb, an herbicide which has been found in samples of standing water from the southern end of the site and in water samples from the drainage ditch and parking lot during the overflow incident. Dinoseb is known to produce a yellow color when dissolved in water.

These limited response actions have only partially addressed the surface water run-off problem in that the surface water run-off would continue to migrate to downstream waterways (i.e. the unnamed tributary, Mill Brook and the Raritan River), with potential for harm to the environment and for human exposure.

In this ROD, EPA is selecting an interim remedial action to control contaminated surface water run-off from the CIC site until the time that the FS addressing all aspects of the CIC site is finalized and the resulting ROD is implemented. This action will be the first operable unit (i.e., the first cleanup phase) of the remediation of the entire site. EPA has elected to address the surface water run-off problem as the first operable unit because of the threat posed by the surface water run-off (see Section 2, above) and because sufficient information is available to select an appropriate remedy for this problem. This action will focus on one of the principal threats presented by the site, that of the contaminated surface water run-off.

One or more future RODs will address the remaining problems presented by the site, including the contamination of soil and groundwater. It should be noted that once the contaminated soil at the site has been effectively remediated, the surface water run-off from the site would no longer become contaminated by contact with the soil. As a result, the remedy selected in this ROD would no longer be needed after the contaminated soil is cleaned up. Therefore, the remedy selected in this ROD is considered to be an interim remedy which can be discontinued once a remedy for the soil contamination has been implemented. EPA expects to be in a position to select a remedy for the soil contamination after treatability studies for the contaminated soils are conducted and after the results of the studies have been analyzed and incorporated in a FS.

5. Summary of Site Characteristics and Site Risk

Based on results of the analysis of surface water samples collected at and near the site, it was determined that surface water run-off from the CIC site is contaminated with various pesticides (DDT, DDE, dieldrin and lindane), herbicides (including dinoseb) and metals (particularly arsenic). DDT/DDD/DDE, the hexachloro-cyclohexane isomers (BHCs, e.g., lindane) and arsenic are all considered potential human carcinogens. Dioxin was not found in any of the surface water samples. The results of the analyses of surface water samples collected during the RI are presented in Exhibit 3. Results of the analyses of surface water run-off samples collected during the March 1989 overflow incident are presented in Exhibit 4.

Chronic exposure to these pesticides (DDT and its metabolites, DDE and DDD, and the BHCs) has been associated with a number of adverse systemic effects, including liver and central nervous system disorders. Arsenic is also considered a human carcinogen with evidence most compelling for inhalation exposures. The chlorinated herbicides and dinoseb, though not known to be carcinogenic to humans, have been associated with adverse reproductive effects in both humans and laboratory animals.

In addition to the adverse toxicological characteristics discussed above, CIC-related contaminants also have physical/chemical characteristics which warrant concern from an environmental standpoint. For example, the chlorinated pesticides (DDT/DDD/DDE, chlordane and dieldrin) are persistent in the environment and absorb strongly to silts, sediments and organic matter. These compounds also exhibit significant bioaccumulation and are all highly resistant to biodegradation and/or biotransformation processes. Arsenic, one of the major contaminants detected at the CIC site, is typically persistent in the environment.

Human exposure to the contaminants in the surface water run-off from the site could result from wading or swimming in waterways downstream of the drainage ditch or from ingestion of fish from these waterways. In the event of another overflow of the drainage ditch to the Metroplex parking lot, there would be an additional opportunity for human exposure.

Samples of site soils, residual structures and groundwater also showed contamination with pesticides, herbicides and metals. Although dioxin was found in some samples of soil and residual structures, because of its relatively low concentration, the risks presented by dioxin are small when compared to the risks presented by arsenic and pesticides. While the contamination of these media does present potential risks, the fencing around the site and the fact that the groundwater near the site is not used for drinking water reduces the likelihood of human exposure to the contaminants in these media, the cleanup of which will be addressed by one or more future operable units.

6. Description of Alternatives

The alternatives analyzed for the interim action to control surface water run-off from the CIC site are presented below. These are numbered to correspond with the numbers in the focused RI/FS report which is available in the CIC site administrative record repositories. The alternatives for run-off control are summarized below:

Alternative 1: No Action

Alternative 2: Site Grading/Surficial Cap Installation/Controlled Release of Uncontaminated Run-off

Alternative 3: Site Grading/Run-off Collection/On-site Treatment/Discharge of Treated Water

Alternative 4: Site Grading/Run-off Collection/ Transportation of Run-off to Off-site Treatment Facility

COMMON ELEMENTS: With the exception of the No Action alternative, the alternatives considered for the control of surface water run-off include a number of common components including: site preparation and grading for control of run-on to and run-off from the site. The extent of the site preparation work for capping (Alternative 2) is slightly greater than for either the on-site or off-site treatment alternatives (Alternatives 3 and 4) in order to assure a surface which will not adversely impact the cap during installation. Alternatives 2 through 4 include site grading to divert surface water run-on around the site and to enhance flow to effectively collect site run-off. Treatment options in Alternatives 3 and 4 differ primarily in the location of the treatment units, on-site and off-site, respectively.

Alternative 1: NO ACTION

The NCP requires that the No Action alternative be evaluated at every site to establish a baseline for comparison. Under this alternative, EPA would take no further action at the site to prevent exposure to surface water run-off from the site but would continue to maintain existing controls in at the site. Existing controls include the fences restricting access to both the CIC property and the contaminated drainage ditch which is located in the power line easement area, and warnings posted on the fence. The No Action alternative also includes periodic monitoring of on-site and off-site surface water and public information meetings to warn area residents and workers of the hazards associated with the site.

The estimated costs and time for design and construction of this alternative are listed below:

Capital Cost:	$0
Annual O&M Costs:	$20,790
Present Worth (PW):	$134,366
Months to Design and Construct:	0

Alternative 2: SITE GRADING/SURFICIAL CAPPING/CONTROLLED RELEASE OF UNCONTAMINATED RUN-OFF

Major features of this alternative include: clearing and grading the site; covering the site (including the contaminated drainage ditch and the portions of the easement area that are west of the drainage ditch) with a surficial cap; construction of a surface water run-on diversion system; and controlled release of collected, uncontaminated surface water run-off from the site. Because the cap would include a liner material (e.g., high density polyethylene) that would be nearly impermeable to water, this alternative would effectively eliminate contact of precipitation with the contaminated soils on the site.

The run-on diversion system would utilize berms, ditches, sheet piling and/or other barriers to divert surface water from running onto the site. The surficial cap would involve an impermeable liner and is also likely to include one or more layers of material such as a geotextile fabric to protect the impermeable liner. Materials such as concrete or clay, which are sometimes used for surficial caps, would not be utilized for Alternative 2. Concrete is relatively permanent and could interfere with the future cleanup of the contaminated soils below the cap. Clay caps must be thick to be effective. The future removal of a clay cap to clean up the underlying soil would generate a large amount of potentially contaminated material. The run-off from the cap would be collected in a storage area which would be created by the site grading and/or by run-off control barriers. The uncontaminated run-off from the cap would be released to the underground conduit in a controlled manner to prevent downstream flooding. In addition, regular inspections and maintenance would be performed to ensure the continued effectiveness of the selected remedy. The details of the surficial cap and other portions of this alternative would be determined during the remedial design.

The estimated costs and time for design and construction of this alternative are listed below:

Capital Cost:	$1,179,891
Annual O&M Costs:	$37,184
Present Worth (PW):	$1,420,211
Months to Design and Construct:	10

An example of Alternative 2 is shown in Exhibit 6. This representative example has been used for illustrative purposes and for estimating the cost of this alternative. However, other designs that are consistent with the above discussion of this alternative may be found to be more effective during the remedial design process and are not being ruled out.

Alternative 3: SITE GRADING/RUN-OFF COLLECTION/ON-SITE TREATMENT/ DISCHARGE OF TREATED WATER

Major features of this alternative include: construction of a surface water run-on diversion system; on-site collection and treatment of contaminated surface water; and discharge of the treated water. On-site collection would involve run-off control barriers, a surface water collection sump and storage tanks to which the contaminated surface water would be pumped. On-site treatment would include process options to meet the cleanup standards for discharge of surface water run-off listed in Exhibit 5. Process options considered include (but are not limited to): activated carbon adsorption and ion exchange to treat the major contaminants of concern in the surface water run-off (pesticides, herbicides and metals). Options for discharge of treated run-off water include either the unnamed creek which flows into the Mill Brook or a permitted POTW (publicly-owned treatment works). The details of the surface water treatment system and other portions of this alternative would be determined during the remedial design.

The estimated costs and time for design and construction of this alternative are listed below:

Capital Cost:	$3,138,443
Annual O&M Costs:	$212,007
Present Worth (PW):	$4,508,644
Months to Design and Construct:	24

An example of Alternative 3 is shown in Exhibit 7. This representative example has been used for illustrative purposes and for estimating the cost of this alternative. However, other designs that are consistent with the above discussion of this alternative may be found to be more effective during the remedial design process and are not being ruled out.

Alternative 4: SITE GRADING/RUN-OFF COLLECTION/OFF-SITE TRANSPORT AND TREATMENT

Major features of this alternative include: construction of a surface water run-on diversion system; temporary on-site collection and storage of contaminated surface water; and trucking of contaminated surface water to a licensed treatment facility. The surface water collection and storage system would be similar to that described for Alternative 3. The details of the surface water storage system and other portions of this alternative would be determined during the remedial design.

The estimated costs and time for design and construction of this alternative are listed below:

Capital Cost:	$2,393,066
Annual O&M Costs:	$2,551,300
Present Worth (PW):	$18,882,118
Months to Design and Construct:	18

An example of Alternative 3 is shown in Exhibit 7. This representative example has been used for illustrative purposes and for estimating the cost of this alternative. However, other designs that are consistent with the above discussion of this alternative may be found to be more effective during the remedial design process and are not being ruled out.

CLEANUP STANDARDS: Exhibit 5 lists the Applicable or [illegible]evant and Appropriate Requirement (ARARs) and To Be Considered standards (TBCs) that pertain to one or more of the remedial alternatives. For each cleanup standard (i.e., for each ARAR or TBC), the alternatives to which that standard pertains are identified.

It should be noted that Federal and State requirements for capping hazardous waste landfills and solid waste landfills have not been selected as ARARs for Alternative 2, even though that alternative involves capping the site. Those capping requirements were intended to result in permanent caps, which would not be appropriate for this interim action. A permanent cap would obstruct future actions to cleanup the site soils and would result in a large volume of potentially contaminated waste material when the cap is removed to remedy the underlying soil.

Because wetlands on the site may be impacted by the proposed remedial alternatives, Executive Order 11990, relating to the protection of wetlands, is pertinent to this operable unit. Section 1 of the Executive Order requires each Federal agency to take action to minimize the destruction, loss or degradation of wetlands when undertaking construction projects. Sections 2 of the Executive Order requires each agency to avoid undertaking construction in wetlands unless the agency finds that (1) there is no practicable alternative to such construction, and (2) the proposed action includes all practicable measures to minimize harm to wetlands. Section 2 also identifies prevention of "risk to health or safety" as a purpose of the Order, while Section 5(a) specifies that "public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion" are factors to be considered in evaluating an action's impact on wetlands.

The on-site wetlands presently have a low functional value due to their limited areal extent, low species diversity, isolation from other wildlife habitats, and due to the high levels of contamination with pesticides, herbicides and metals. Any

significant protection of on-site wetlands is not possible without remediation of the contaminated on-site soils, which will be addressed by a subsequent operable unit.

Alternatives 2, 3 and 4 each would result in some impact on the on-site wetlands, with Alternative 2 causing the greatest impact because this alternative would involve the stripping of all vegetation from the site and the covering of the site with a cap. Although this alternative would have the greatest impact on wetlands, it will be found that Alternative 2 would also provide greater protection of human health and the environment than the other alternatives (see Section 7, below). Thus, there is no means of achieving the objectives of this remedial measure (protecting human health and the environment from the contaminated surface water run-off from the site) that is more practicable for achieving those objectives than Alternative 2. In view of the Executive Order's language concerning public health and safety, the implementation of Alternative 2 will meet the requirements of the Executive Order.

The FS for the operable unit addressing the remediation of site soils will evaluate methods to restore these wetlands and/or to mitigate any unavoidable adverse impacts on these wetlands. Appropriate measures for wetlands protection will be selected in a ROD based on that FS. EPA intends to provide substantive protection of wetlands in this manner.

OFF-SITE WASTE MANAGEMENT: For all of the remedial alternatives, any and all off-site shipment of hazardous substances to a treatment, storage or disposal facility would be subject to EPA's policy for off-site management of Superfund wastes (i.e., Revised Procedures for Planning and Implementing Off-site Response Actions, November 13, 1987, as updated). This would be especially relevant to Alternative 4, which involves off-site shipment of the collected surface water run-off.

7. Summary of Comparative Analysis of Alternatives

A summary of the comparative analysis of alternatives using the nine criteria established by EPA for evaluating alternatives is presented below:

Overall Protection of Human Health and the Environment

Alternative 1 would continue to limit exposure to surface water contaminants by restricting access to the site and by warning local workers and residents of the risks they face by contacting the run-off. However, contaminated run-off would continue to migrate out of the restricted area to the unnamed creek, Mill Brook and the Raritan River. Once implemented, Alternatives 2 through 4 would protect both human and environmental receptors from contact with

contaminants in the site run-off by eliminating or removing contaminants from the surface water run-off. Primarily because Alternative 2 can be implemented in a shorter time than Alternative 3 or Alternative 4, it would provide greater overall protection of human health and the environment over the intended duration of this interim action, when compared to any of the other alternatives.

Compliance with ARARs

Alternative 1 would not directly address contaminated surface water migrating from the site and, thus, would not attain the cleanup standards for discharge of surface run-off identified in Exhibit 5. Once implemented, each of Alternatives 2, 3, and 4 would fully address the contaminated surface water problem at the site either by eliminating the contamination of the surface water by precluding contact with contaminated site soils (Alternative 2) or by treating contaminated surface water (Alternatives 3 and 4). Each of the three alternative would attain all ARARs and TBCs which pertain to it.

Long-Term Effectiveness

Alternative 1 is not effective in the long-term or short-term. Alternative 2, 3 and 4 would each be effective, once implemented. Because this is an interim remedial action, the long-term effectiveness criteria was applied by evaluating the ability of each alternative to be effective for the maximum expected duration of the interim action (eight years). Each of these alternatives can, with appropriate operation and maintenance, maintain its effectiveness for the expected duration of the interim remedial action.

Reduction of Toxicity, Mobility or Volume

None of the alternatives evaluated for the interim remedy would utilize treatment to provide significant reductions in the toxicity, mobility or volume of on-site contaminants. Although Alternative 3 and 4 do involve the treatment of contaminants, the reductions would not be significant in terms of the overall site remediation. Measures to permanently reduce the quantities and threats associated with the contaminants will be evaluated in a subsequent FS which addresses the entire CIC site. Alternatives 2 through 4 would reduce the toxicity and volume of contaminants in the surface water run-off to satisfy the goals of the interim remedial action. Alternative 2 would also reduce the mobility of contaminants by abating the mobilization of contaminants by precipitation.

Short-Term Effectiveness

Alternative 1 presents the least short-term risks to on-site workers since construction is not a task required for implementing

the No Action alternative. However, it will not reduce the existing risks. Alternatives 2, 3 and 4 each will require the execution of health and safety protection measures, including appropriate protective clothing and respiratory protection, during the remedial construction to adequately protect workers. Health and safety measures to protect the community, such as dust suppression, will also be required. However, none of the alternatives present implementation problems which cannot be successfully addressed by available construction methods.

The estimated time periods for design of the systems and periods for the construction are as follows: Alternative 2, 6 months for design and 4 months to construct; Alternative 3, 12 months for design and 12 months to construct; and Alternative 4, 9 months to design and 9 months to construct. Therefore, Alternative 2 will remediate the run-off problem and abate the associated risks most quickly, followed by Alternatives 3 and 4, in that order.

Implementability

The No Action alternative is the simplest alternative to implement from a technical viewpoint since it only involves actions to periodically inspect and sample the site, ensure restricted access to the site and continue to provide information about the site to the surrounding communities.

The operations associated with Alternatives 2, 3 and 4 (e.g., clearing, grading, lining, excavation, surface water diversion and detention techniques, pipe construction, treatment plant construction) employ readily available and reliable operations and are thus technically feasible. Alternative 2 requires greater site preparation for protection of the impermeable liner. Alternative 3 and 4 require coordination with several vendors to implement the associated collection, storage, transport and treatment tasks. Alternative 3 would require the greatest technical effort. Administrative efforts for the capping and treatment alternatives involve obtaining access to the easement adjacent to the eastern site boundary, possible relocation of utility lines, obtaining regulatory agency approvals, development of a traffic control plan, and inspection and maintenance of all site controls and systems. Additionally, Alternative 4, would require a manifesting system to track disposal of each tanker which transports the liquid waste. Each of the tasks listed above is implementable from both an administrative and a technical perspective.

Cost

Alternative 1, No Action, has an estimated present worth cost of $134,366. The primary constituents of this cost are inspection, sampling, chemical analysis and public awareness programs. Present worth costs for Alternatives 2, 3 and 4 are: $1,420,211; $4,508,644; and $18,882,118; respectively. The major cost item for

the capping system is the work associated with site preparation. The other two alternative share the same costs for site preparation. However, they differ significantly on the costs for treatment. Treatment costs for Alternative 4 are higher because of the off-site transport and treatment of the volumes of contaminated surface water that are expected to be generated.

State Acceptance

The State of New Jersey Department of Environmental Protection concurred with the selected remedy described in this Record of Decision (Alternative 2). The State has not endorsed any of the other remedial alternatives.

Community Acceptance

Members of the community who spoke at the August 10, 1989 public meeting asked many questions to obtain information regarding the RI/FS findings, the details of EPA's Proposed Plan and EPA's rationale for the preferred alternative. One chief concern of the speakers was how and when the entire site cleanup would be accomplished. These speakers expressed a clear preference for a complete cleanup of the site. However, they did not express a clear position for or against any of the interim action alternatives as the first step in a complete site cleanup. EPA received one letter dated August 28, 1989 which contained written comments on EPA's Proposed Plan. This letter was signed by about twenty members of the community. The letter expressed opposition to Alternative 2, as well as to the other alternatives developed by EPA, on the grounds that none of these alternatives address the cleanup of the entire site. This letter also expressed concerns about possible air impacts resulting from earth moving activities during the preparation of the site for capping, and presented a number of other comments and questions. EPA has responded to these comments by stressing the interim nature of the selected remedy and by stating that EPA will proceed to develop and implement a complete site cleanup plan as soon as it is possible. While agreeing that this interim action is not a complete remedy, EPA's response notes that this interim action will adequately deal with the one route of exposure to contaminants from the site that currently presents the greatest risk (i.e., the contaminated surface water run-off). The EPA response also provides assurance that the remedial work will be performed in a manner that will not cause adverse air quality impacts. In addition, EPA will be available to meet with interested members of the community in the future to discuss any remaining concerns about the site. (Refer to the attached Responsiveness Summary for further details.)

8. Selected Remedy

EPA has determined that Alternative 2 is the remedial alternative

that best satisfies EPA's evaluation criteria. Once implemented, Alternative 2 is more protective than Alternative 1 and at least as protective as Alternative 3 or Alternative 4. Because Alternative 2 can be implemented more expeditiously than Alternatives 3 or 4, it would attain overall protection of human health and the environment more quickly than these alternatives. Primarily for this reason, it provides greater overall protection and greater short-term effectiveness than the other alternatives. It is also less costly than Alternative 3 or Alternative 4. With respect to the criterion of reduction of toxicity, mobility or volume, Alternative 2 is only marginally less effective than Alternatives 3 and 4. The State has concurred with the selection of Alternative 2, but has not endorsed any of the other alternatives. Although some members of the community have expressed their disagreement with the selected remedy, EPA's responsiveness summary addresses those comments and concerns expressed during the public comment period. With respect to all remaining evaluation criteria, Alternative 2 equals or ranks higher than any of the other alternatives. In addition, it should be noted that Alternative 2 has less potential thar Alternatives 3 or 4 to interfere with future remediation of the soils at the site. The concrete foundations of the tanks that would be needed for Alternatives 3 and 4 could interfere with the remediation of the underlying soil, while the surficial cap for Alternative 2 could be removed relatively easily.

Based on the above considerations, Alternative 2 is selected as the remedy for the first operable unit.

9. Statutory Determinations

Protection of Human Health and the Environment

The selected remedy will adequately protect human health and the environment from the contaminated surface water run-off leaving the site. The cap which will be installed will be effective in preventing contact between the water on the site surface and the contaminated soils and debris beneath the cap. As a result the water running off the cap will not contain significant contamination or present significant risk. The selected remedy will not pose unacceptable short-term risks during implementation. While improving surface water quality, this alternative will not adversely affect other media. In fact, the cap will have an added benefit of reducing the migration of contaminants from the site to the groundwater since the cap will prevent rainwater from mobilizing site contaminants and carrying them deeper into the ground. It will also eliminate the potential for direct contact with the contaminants on the surface ot the site.

Compliance with Applicable or Relevant and Appropriate Requirements

The selected remedy will comply with all Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered standards (TBCs) that pertain to it. These ARARs and TBCs are identified in Exhibit 5.

Cost-Effectiveness

The selected remedy is a cost-effective remedy and is the most cost-effective of the alternatives which would adequately protect human health and the environment from the surface water run-off from the site.

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

The selected remedy does not use permanent solutions and alternative treatment technologies. However, it is not practicable to use permanent solutions given the interim nature of this operable unit and the fact that treatability studies are needed before a permanent solution can be reliably selected. Those alternatives which use treatment technologies for the surface water run-off were evaluated and were found to be less protective of human health and the environment than the selected remedy.

Section 121(b) of CERCLA requires that a selected remedial alternative utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. However, Section 121(b) was not intended to make the use of permanent solutions and alternative treatment technologies an end in itself, but was intended to use such solutions and technologies to the extent practicable, as a means of ensuring the protection of human health and the environment. Since, for this operable unit, the remedial alternatives which would make greater use of permanent solutions or alternative treatment technologies are less protective than the selected remedy, the seleced remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable, considering CERCLA's primary goal of protecting human health and the environment.

Preference for Treatment as a Principal Element

The selected remedy does not utilize treatment. As stated above, it is not practicable to utilize a remedy which utilizes treatment as the interim remedy for surface water run-off because such remedies would be less protective of human health and the environment than the selected remedy. Remedies utilizing treatment as a principal element are being evaluated as part of the FS work for the contaminated soils and groundwater at the site.

Section 121(b) of CERCLA creates a preference for remedies which utilize treatment by requiring that the long-term disadvantages of remedial alternatives are taken into account in the remedy selection process. Since treatment alternatives tend to minimize long-term disadvantages of remedies, remedies relying on treatment are favored by taking long-term disadvantages into account. However, Section 121(b) also takes short-term risks into account in the remedy selection process. Section 121(b) was not intended to establish treatment as an end in itself, but was intended to create a preference for treatment as a means for ensuring the protection of human health and the environment. Since, for this operable unit, the remedial alternatives which have a greater reliance on treatment are less protective than the selected remedy, CERCLA's preference for remedies that rely on treatment as a principal element has not been satisfied.

10. Documentation of Significant Changes

There have been no significant changes in the selected remedy from the preferred remedy described in the Proposed Plan.

EXHIBITS

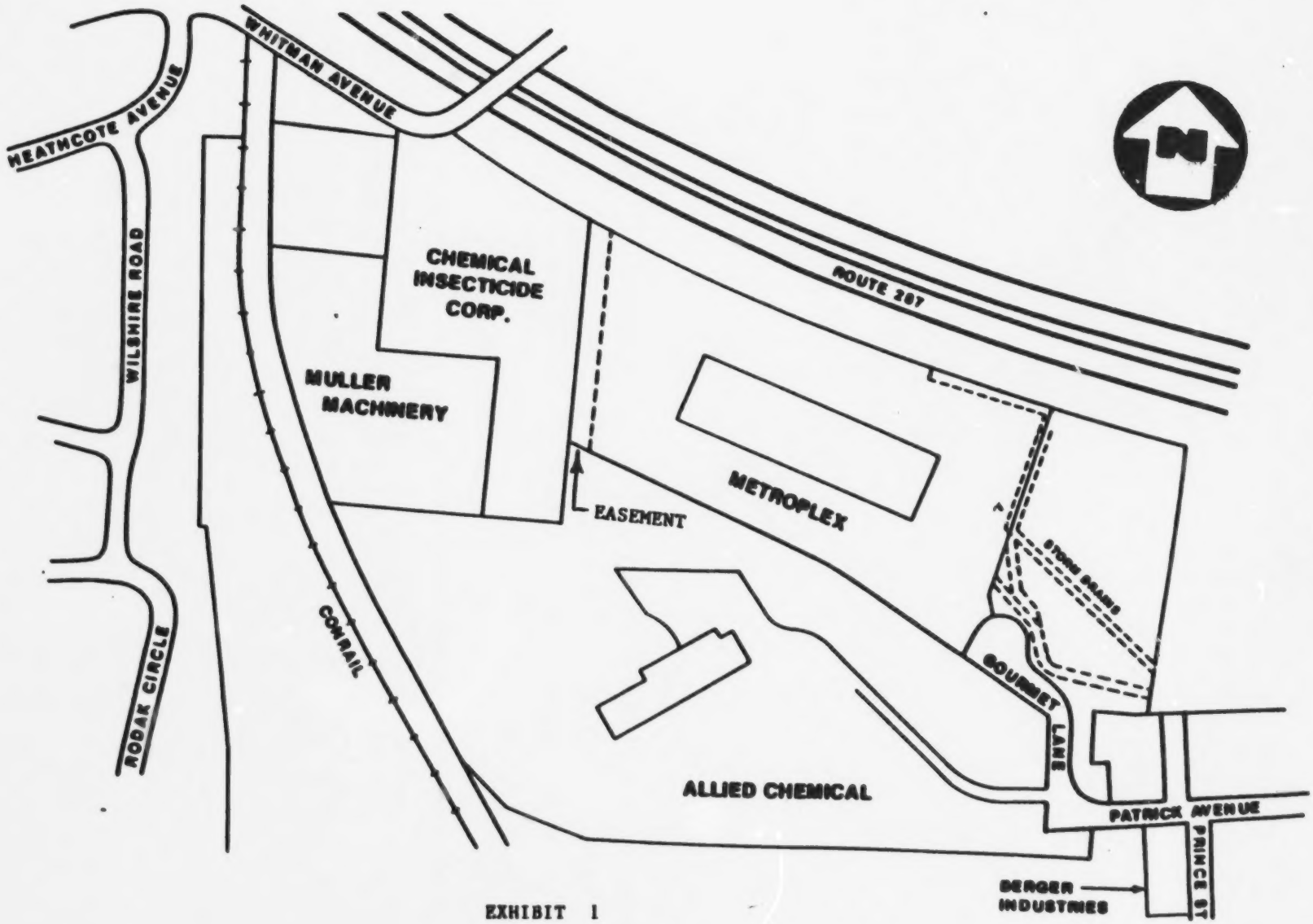
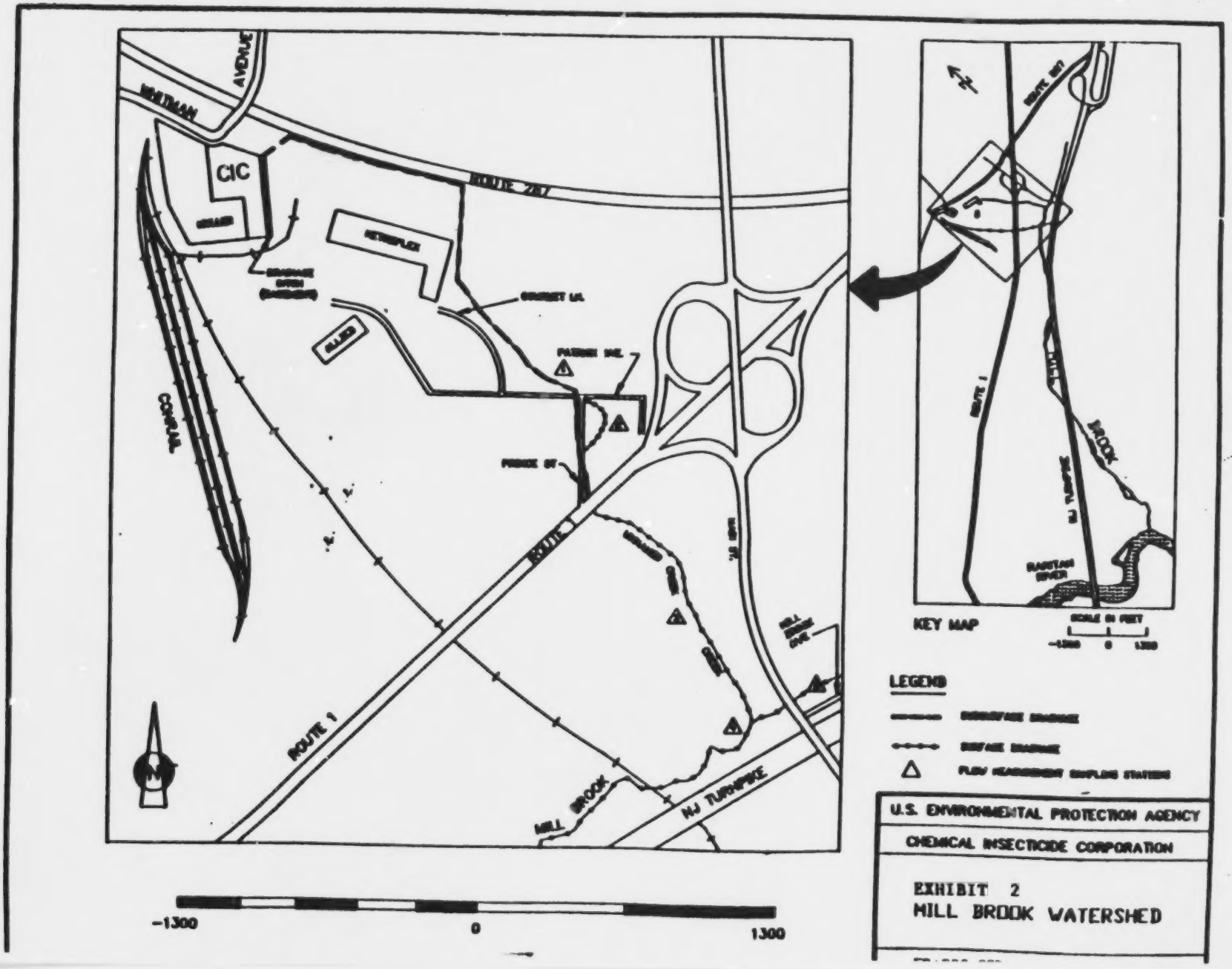


EXHIBIT 1

DETAILED SITE LOCATION MAP

CHEMICAL INSECTICIDE CORP., EDISON, N.J.


AVENUE
CIC
ROUTE 27
CORRAL
ROUTE 1
MILL BROOK
NJ TURNPIKE
KEY MAP
LEGEND
-1300
0
1300
U.S. ENVIRONMENTAL PROTECTION AGENCY
CHEMICAL INSECTICIDE CORPORATION
EXHIBIT 2
MILL BROOK WATERSHED

Reproduced from best available copy.

EXHIBIT 3 (Sheet 1 of 2)

CHEMICAL INSECTICIDE CORPORATION

CHEMICALS DETECTED IN ON-SITE SURFACE WATER
UNITS: UG/L

COMPOUND	COUNT OF VALID ANALYSIS	COUNT OF OCCURRENCES	COUNT OF UNDETECTEDS	MINIMUM DETECTED CONCENTRATION	MAXIMUM DETECTED CONCENTRATION	MEAN DETECTED CONCENTRATION	COUNT OF ESTIMATED VALUES	COUNT OF REJECTED VALUES
PESTICIDES/PCBs								
ALPHA-BHC	3	1	2	1.8	1.8	1.8	0	0
BETA-BHC	3	1	2	0.5	0.5	0.5	0	0
GAMMA-BHC	3	1	2	1.2	1.2	1.2	0	0
ALDRIN	3	1	2	0.6	0.6	0.6	0	0
DIELDRIN	3	1	2	0.3	0.3	0.3	1	0
4-4-DDE	3	1	2	0.3	0.3	0.3	1	0
4-4-DDD	3	1	2	0.6	0.6	0.6	1	0
4-4-DDT	3	1	2	2.5	2.5	2.5	0	0
HERBICIDES (ug/l)								
SILVEX	10	1	9	0.3	0.3	0.3	0	0
INORGANICS								
ALUMINUM	11	11	0	111.0	3500.0	744.6	1	0
ANTIMONY	11	1	10	55.0	55.0	55.0	0	0
ARSENIC	11	8	3	13.0	1680.0	456.4	2	0
BARIUM	9	9	0	28.0	217.0	84.8	1	2
BERYLLIUM	11	1	10	1.6	1.6	1.6	0	0
CADMIUM	11	7	4	4.3	10.0	6.1	0	0
CALCIUM	8	8	0	32700.0	70200.0	42537.5	1	3
CHROMIUM	11	9	2	12.0	31.0	16.1	1	0
COBALT	3	1	2	15.0	15.0	15.0	1	0
COPPER	3	2	1	9.0	19.0	14.0	2	8
IRON	11	11	0	227.0	8750.0	3772.2	2	0
LEAD	1	1	0	6.7	6.7	6.7	1	10
MAGNESIUM	3	3	0	6750.0	10600.0	8766.7	1	0
MANGANESE	11	11	0	22.0	427.0	176.6	1	0
NICKEL	11	9	2	11.0	46.0	19.9	1	0
POTASSIUM	8	7	1	2800.0	7540.0	4694.3	5	3
SELENIUM	11	3	8	3.0	3.0	3.0	0	0
SILVER	11	2	9	8.6	21.0	14.8	0	0
SODIUM	7	7	0	6200.0	22000.0	12367.1	1	4
VANADIUM	11	8	3	9.5	93.0	24.1	0	0
ZINC	5	5	0	49.0	287.0	140.8	2	6

Reproduced from best available copy.

EXHIBIT 3 (Sheet 2 of 2)

CHEMICAL INSECTICIDE CORPORATION

CHEMICALS DETECTED IN ON-SITE SURFACE WATER
UNITS: UG/L (EXCEPT PCDD/Fs = NG/L)

COMPOUND	COUNT OF VALID ANALYSIS	COUNT OF OCCURRENCES	COUNT OF UNDETECTEDS	MINIMUM DETECTED CONCENTRATION	MAXIMUM DETECTED CONCENTRATION	MEAN DETECTED CONCENTRATION	COUNT OF ESTIMATED VALUES	COUNT OF REJECTED VALUES
DIOXINS/FURANS (ng/l)								
2378-TCDF	8	1	7	0.2	0.2	0.2	1	0
TETRA (TOTAL)	10	1	9	0.2	0.2	0.2	0	0
OCTA	10	1	9	0.7	0.7	0.7	0	0
BASE/NEUTRAL ACID EXTRACTABLES								
1,2-DICHLOROBENZENE	11	1	10	2.0	2.0	2.0	1	0
VOLATILE ORGANICS								
CHLOROFORM	5	1	4	4.4	4.400	4.4	1	0

EXHIBIT 4

EPA REMOVAL ACTION WATER SAMPLE RESULTS

Two water samples were taken on March 7, 1989 by region II TAT. These samples were collected in the drainage ditch on the east side of the CIC site and in the parking lot of Metroplex where run-off had occurred. Samples were analyzed for priority pollutant metals, volatile organics +15, PCB/Pesticides along with a computer aided library search of 33,000 compounds. Results are tabulated as follows:

MARCH 7, 1989 Water Sample Results (PPB)

Compound	Run-off	Drainage Ditch
Aluminum	6,319.0	9,086.0
Arsenic	87.6	86.6
Barium	198.0	169.0
Cadmium	4.5	3.3
Calcium	25,684.0	14,866.0
Chromium	12.0	20.5
Cobalt	19.2	4.9
Copper	18.8	35.6
Iron	4,378.0	6,042.0
Lead	96.0	82.5
Magnesium	1,910.0	1,910.0
Mercury	.49	.95
Nickel	27.5	19.2
Potassium	218,806.0	2,973.0
Di-n-butylphthalate	2.8	---
2(1-methyl-propyl-4,6-dinitrophenol (Dinoseb)	225.0	181.0
bis (1,1-dimethylethyl) phenol	---	12.0

0927K

EXHIBIT 5 (Page 1 of 2)

SUMMARY OF ARARs AND TBCs AND THE
ALTERNATIVES TO WHICH THEY PERTAIN
FOR THE CHEMICAL INSECTICIDE CORPORATION SITE

ARAR OR TBC CRITERIA	CITATION	PERTINENT ALTERNATIVES
NJPDES Water Quality Toxic Effluent Limits	NJAC 7:14-A, Appendix F	1, 2 and 3
NJPDES Additional Requirements Applicable to Discharges to Surface Water	NJAC 7:14A-3	1, 2 and 3
NJPDES Additional Requirements for Users of Domestic Treatment Works	NJAC 7:14A-13	3
Federal Pretreatment Requirements for Existing and New Sources of Pollution	40 CFR Part 403	3
Federal and New Jersey Hazardous Waste TSD Facility Requirements	40 CFR Part 264 and NJAC 7:26	3 and 4
New Jersey Soil Erosion and Sediment Control Requirements	NJAC 2:90-1.3	2, 3 and 4
New Jersey Surface Water Quality Standards	NJAC 7:9-4	1, 2 and 3
Federal Executive Order Concerning Protection of Wetlands	Executive Order 11990	1, 2, 3 and 4

EXHIBIT 5 (Page 2 of 2)

SUMMARY OF ARARs AND TBCs AND THE
ALTERNATIVES TO WHICH THEY PERTAIN
FOR THE CHEMICAL INSECTICIDE CORPORATION SITE

ARAR OR TBC CRITERIA	CITATION	PERTINENT ALTERNATIVES
Health Advisory from the Office of Drinking Water for Dinoseb, EPA, August 1988		1, 2 and 3

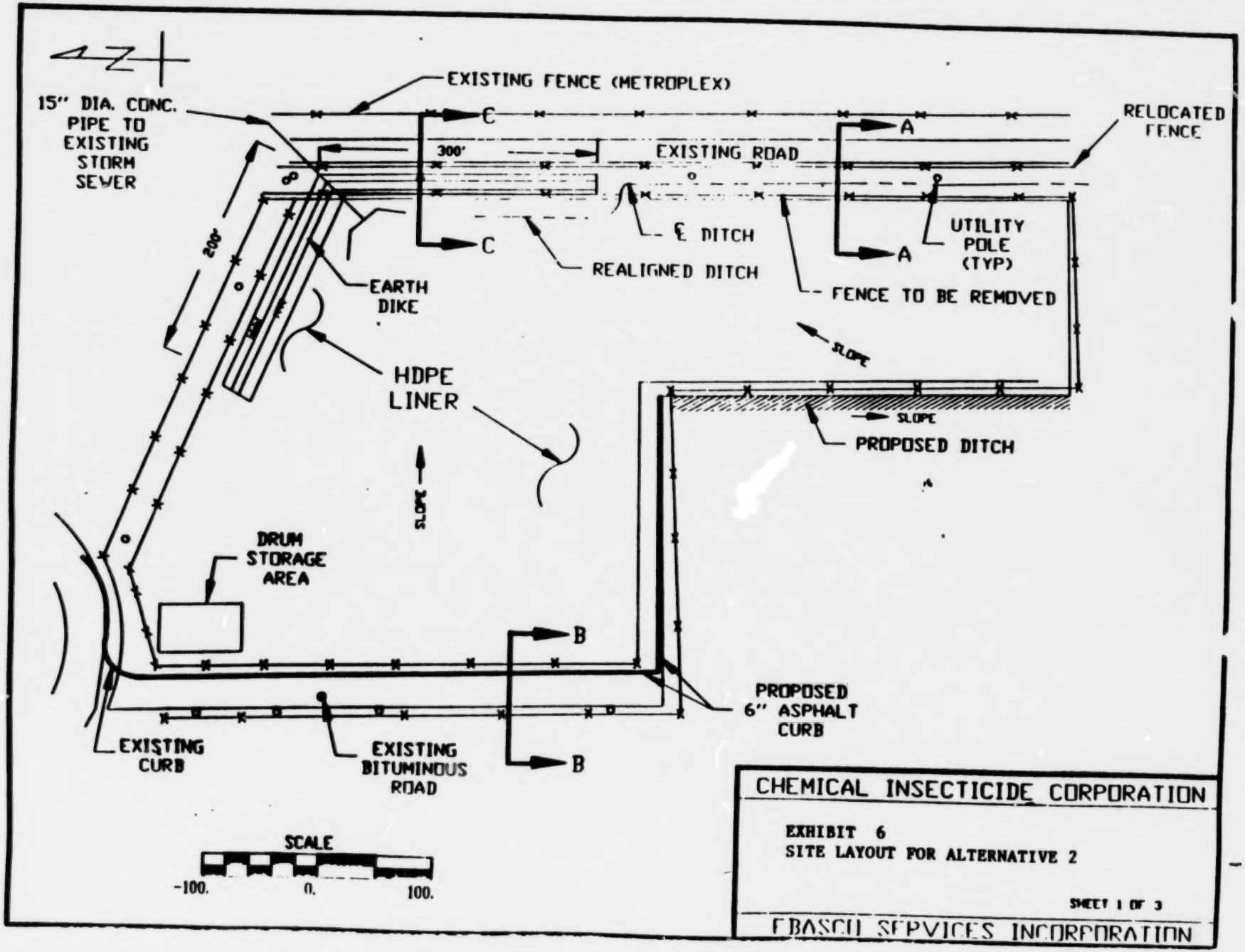
CLEANUP STANDARDS FOR DISCHARGE OF SURFACE WATER RUNOFF

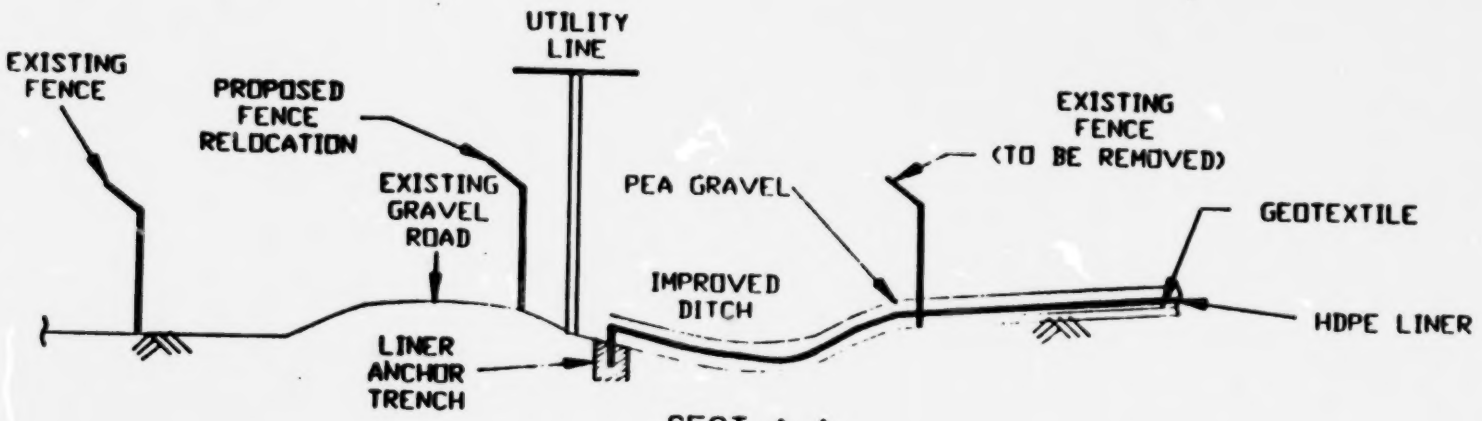
The following cleanup standards for the discharge of the surface water run-off to a waterway have been selected for this remedial action:

Contaminant	Cleanup Standard (ug/l)
4,4 - DDT	0.001
4,4 - DDD	0.001
Dieldrin	0.0019
Gamma BHC (lindane)	0.08
Dinoseb	35.0
Arsenic	50.0

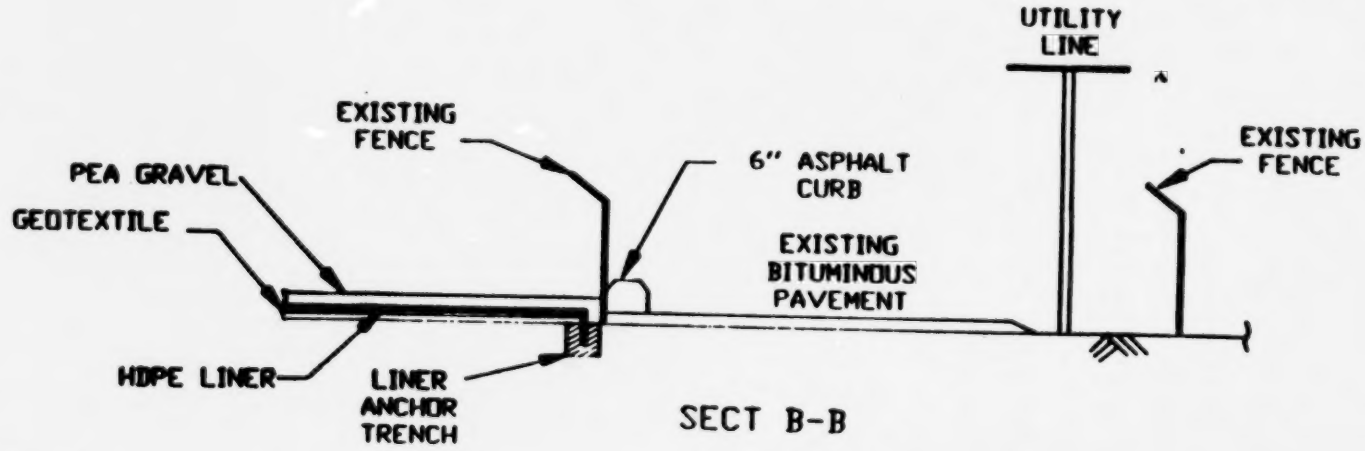
Except for dinoseb and arsenic, the standards are based on New Jersey Pollutant Discharge Elimination System Toxic Effluent Limits. The standard for arsenic is based on New Jersey Surface Water Quality Standards. The Standard for dinoseb is based on a Federal Drinking Water Health Advisory.

The above cleanup standards pertain to Alternatives 1, 2 and 3 (all alternatives involving a discharge of surface run-off to a waterway at or near the site).


EXISTING FENCE (METROPLEX)
15" DIA. CONC. PIPE TO EXISTING STORM SEWER
RELOCATED FENCE
300'
EXISTING ROAD
℄ DITCH
REALIGNED DITCH
UTILITY POLE (TYP)
FENCE TO BE REMOVED
200'
EARTH DIKE
HDPE LINER
SLOPE
PROPOSED DITCH
DRUM STORAGE AREA
PROPOSED 6" ASPHALT CURB
EXISTING CURB
EXISTING BITUMINOUS ROAD
SCALE
-100.
0.
100.
CHEMICAL INSECTICIDE CORPORATION
EXHIBIT 6
SITE LAYOUT FOR ALTERNATIVE 2
SHEET 1 OF 3
EBASCO SERVICES INCORPORATION



SECT A-A



SECT B-B

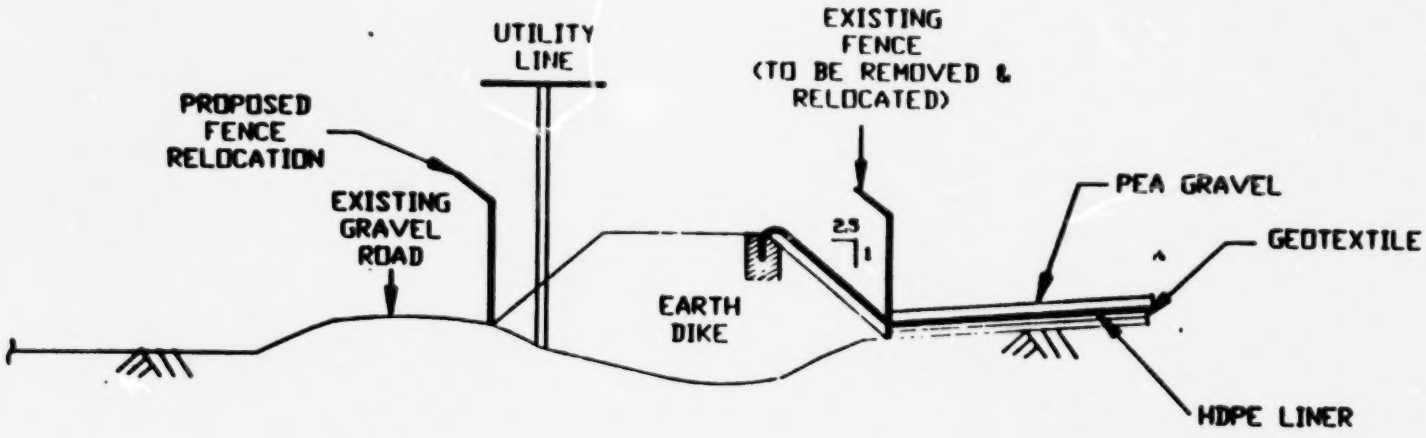
CHEMICAL INSECTICIDE CORPORATION

EXHIBIT 6

CROSS-SECTIONS

SHEET 2 OF 3

ERASCH SERVICES INCORPORATION



SECT C-C
N.T.S.

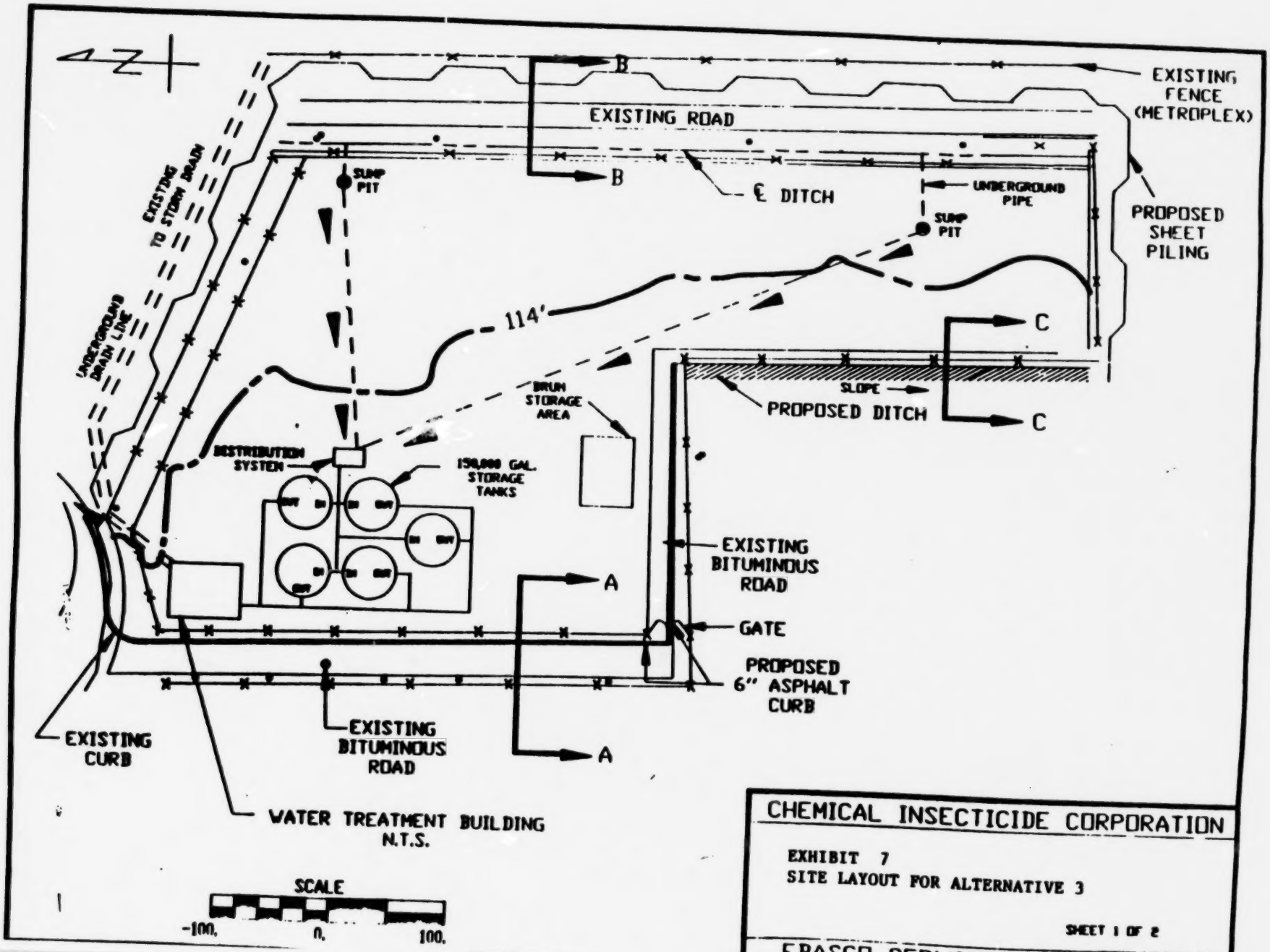
CHEMICAL INSECTICIDE CORPORATION

EXHIBIT 6

CROSS-SECTIONS

SHEET 3 OF 3

EBASCO SERVICES INCORPORATION

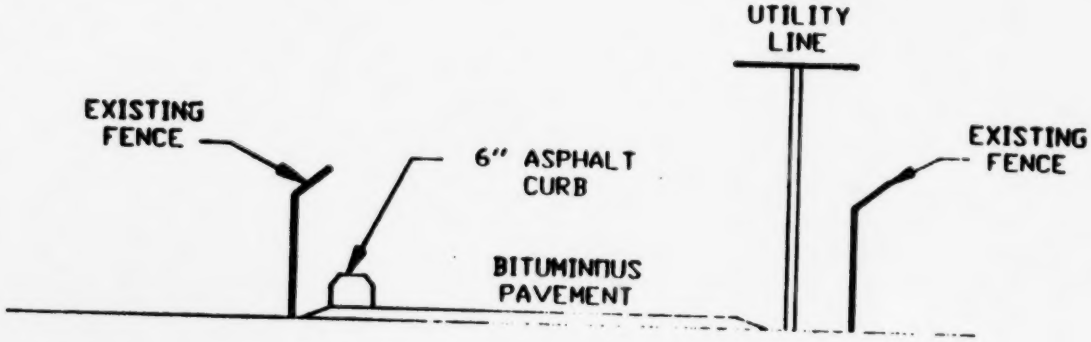


CHEMICAL INSECTICIDE CORPORATION

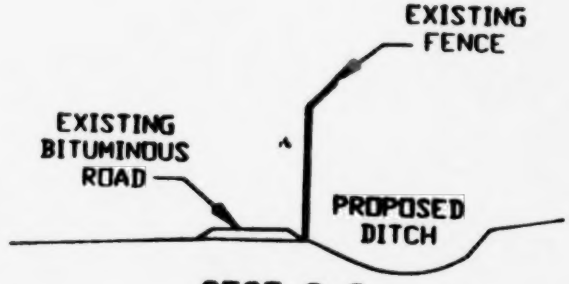
EXHIBIT 7
SITE LAYOUT FOR ALTERNATIVE 3

SHEET 1 OF 2

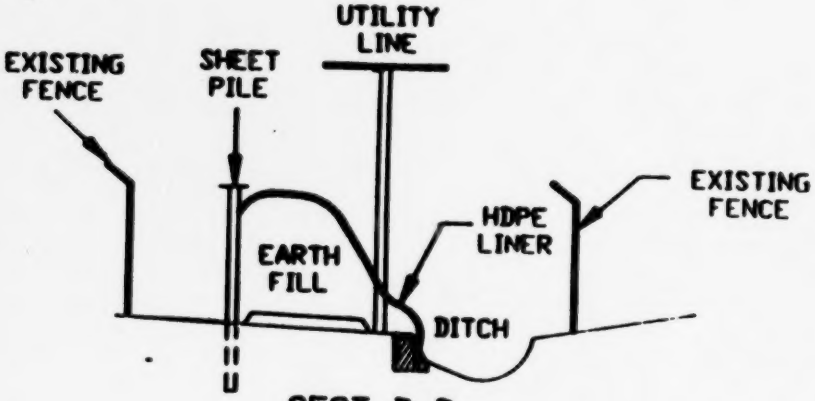
EBASCO SERVICES INCORPORATION



SECT A-A
N.T.S.



SECT C-C
N.T.S.



SECT B-B
N.T.S.

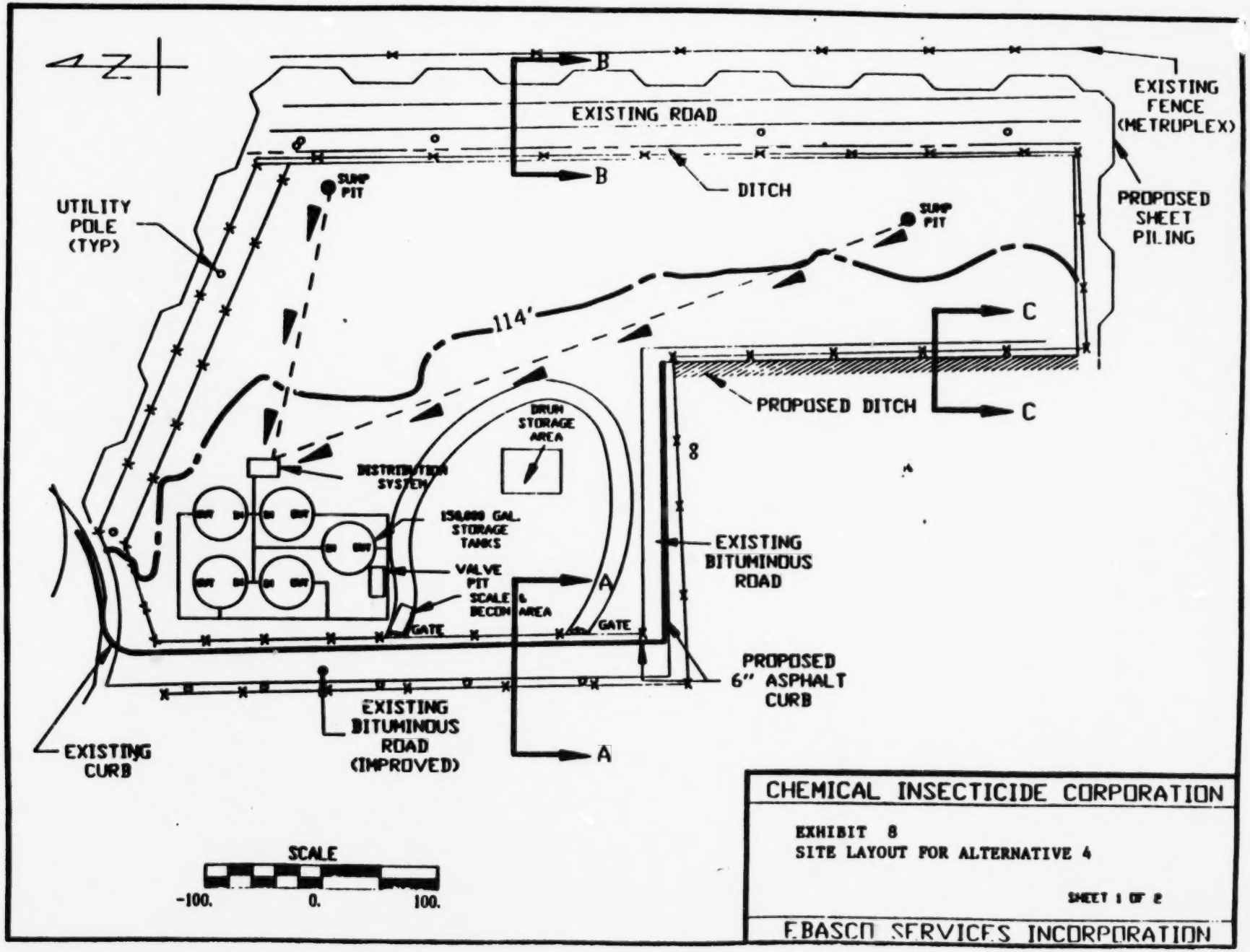
CHEMICAL INSECTICIDE CORPORATION

EXHIBIT 7

CROSS-SECTIONS

SHEET 2 OF 2

EBASCO SERVICES INCORPORATION

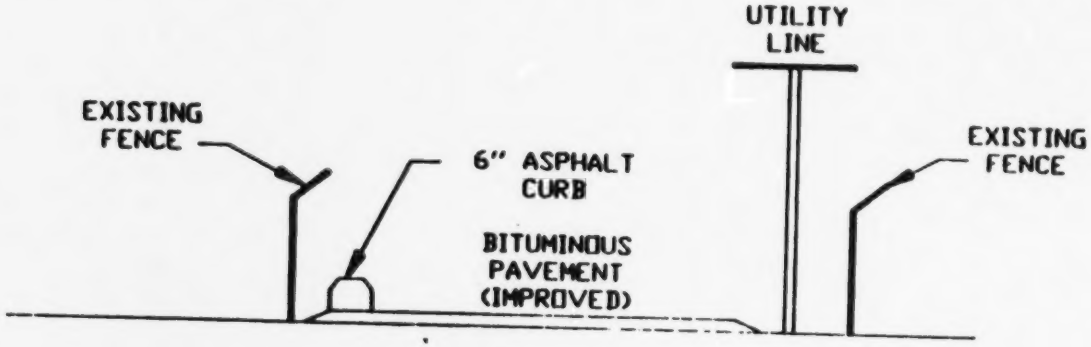


CHEMICAL INSECTICIDE CORPORATION

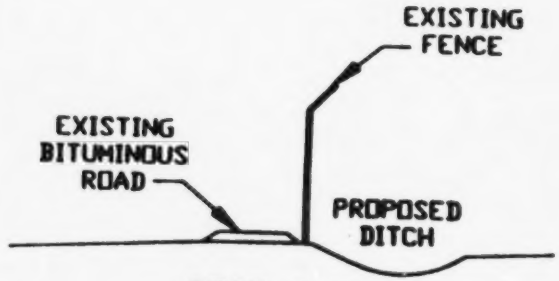
EXHIBIT 8
SITE LAYOUT FOR ALTERNATIVE 4

SHEET 1 OF 2

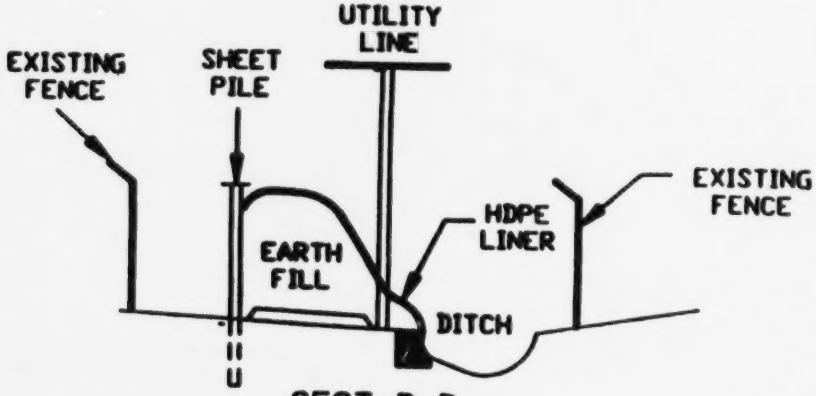
EBASCO SERVICES INCORPORATION



SECT A-A
N.T.S.



SECT C-C
N.T.S.



SECT B-B
N.T.S.

CHEMICAL INSECTICIDE CORPORATION

EXHIBIT 8

CROSS-SECTIONS

SHEET 2 OF 2

EBASCO SERVICES INCORPORATION

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY
CHEMICAL INSECTICIDE CORPORATION SITE
EDISON, NEW JERSEY

I. RESPONSIVENESS SUMMARY OVERVIEW

The U.S. Environmental Protection Agency (EPA) held a public comment period from August 3, 1989 through September 8, 1989 for interested parties to comment on the Focused Remedial Investigation/Feasibility Study (RI/FS) report for Surface Water Run-off Control and the Proposed Remedial Action Plan (PRAP) for the Chemical Insecticide Corporation (CIC) Site in Edison, New Jersey.

The PRAP, which has been provided as Appendix A of this document, provides a summary of the background information leading up to the public comment period. Specifically, the PRAP includes information pertaining to the history of the CIC Site, the scope of the proposed cleanup action and its role in the overall Site cleanup, the risks presented by the Site, the descriptions of the remedial alternatives evaluated by EPA, the identification of EPA's preferred alternative, the rationale for EPA's preferred alternative, and the community's role in the remedy selection process.

EPA held a public meeting at 7:00 p.m. on August 10, 1989 at the Edison Municipal Complex in Edison, New Jersey to outline the interim remedial alternatives described in the focused RI/FS and to present EPA's proposed remedial alternative for controlling the surface water run-off from the CIC Site.

The responsiveness summary, required by the Superfund Law, provides a summary of citizens' comments and concerns identified and received during the public comment period, and EPA's responses to those comments and concerns. All comments received by EPA during the public comment period will be considered in EPA's final decision for selecting the remedial alternative for addressing surface water run-off from the CIC Site.

This responsiveness summary is organized into sections and appendices as described below:

I. **RESPONSIVENESS SUMMARY OVERVIEW.** This section outlines the purposes of the Public Comment period and the Responsiveness Summary. It also references the appended background information leading up to the Public Comment period.

II. **BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS.** This section provides a brief history of community concerns and interests regarding the Chemical Insecticide Corporation Site.

III. **SUMMARY OF MAJOR QUESTIONS AND COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES TO THESE COMMENTS.** This section summarizes the oral comments received by EPA at the August 10, 1989 public meeting, and provides EPA's responses to these comments.

IV. **WRITTEN COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES TO THESE COMMENTS.** This section contains the one letter received by EPA containing written comments, as well as EPA's written response to that letter.

Appendix A: The Proposed Remedial Action Plan (PRAP) which was distributed to the public during the public meeting on August 10, 1989.

Appendix B: Sign-in sheets from the Public Meeting held on August 10, 1989 in The Edison Municipal Complex, Edison, New Jersey.

Appendix C: Names, addresses and phone numbers of the information repositories designated for the CIC Site.

Appendix D: A list of the laboratories used to analyze samples from the CIC Site.

II. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

Township records show that community concern regarding the CIC Site, existed as early as 1966, when residents living near the Site complained of odors emanating from the CIC Site. The Edison Township Department of Health and Human Resources and the New Jersey Department of Health (NJDOH) continued to receive complaints from residents and business operators about odors and air pollution from 1966 through 1970.

Community interest increased in June 1983 when the New Jersey Department of Environmental Protection (NJDEP) and EPA began collecting soil samples for a State-wide dioxin-screening program. Residents were concerned about the potential for off-site migration of dioxin into surrounding residential areas. EPA held a public meeting on June 20, 1983 to address community concerns. Several hundred residents attended the meeting and extensive media coverage continued for weeks.

Residents, local officials and business owners were interviewed in 1987 during the development of the Community Relations Plan for the Site. Their concerns are summarized below:

- Residents would like to be better informed of all EPA activities at the CIC Site.
- Residents were concerned about the potential exposure to dioxin during EPA activities.
- Local officials and residents were concerned that local property values could be adversely affected by the EPA activities at the CIC Site.
- Residents and business owners were concerned regarding the extent and potential of contamination at the Site and of the surrounding business and residential properties.

As part of EPA's responsibility and commitment to the Superfund Program, the community has been kept informed of ongoing activities conducted at the CIC Site. EPA has established information repositories where relevant site documents may be reviewed. Documents stored at the repositories include:

- The focused RI/FS Report for surface run-off control.
- The Proposed Remedial Action Plan (PRAP).
- Fact sheets, summarizing the technical studies conducted at the Site.
- Public Meeting Transcript.

EPA's selection of a remedy to control surface water run-off at the Site will be presented in a document known as a Record of Decision (ROD). The ROD and the documents containing information that EPA used in making its decision (except for documents that are published and generally available) will also be placed in the information repositories, as will this responsiveness summary.

III. SUMMARY OF MAJOR QUESTIONS AND COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES TO THESE COMMENTS

Oral comments raised during the public comment period for the CIC Site interim remediation have been summarized below together with EPA's response to these comments.

COMMENT: One resident wanted to know why it was necessary to select an interim remediation alternative if a final remedy would be the most protective of human health and the environment.

RESPONSE: A final remedy which would, among other things, clean up the contaminated soil at the Site, cannot be selected at the present time. EPA has determined that treatability studies are needed to find the most effective technology or combination of technologies for treating the Site soils. The particular mixture of pollutants in the Site soils (arsenic and pesticides, in particular) is potentially difficult to treat. This is because the most proven technology for organic pesticides, thermal treatment (e.g. incineration), may not be effective in treating arsenic. In fact, the arsenic emissions from an incinerator treating Site soils might present an air pollution hazard, unless treatability studies can show that air pollution controls are capable of reducing arsenic emissions to safe levels. Therefore, EPA is currently planning to test thermal treatment and other technologies such as soil extraction and soil fixation on soil samples from the Site.

Depending on the final remedy eventually selected, it could take up to eight years to perform treatability studies, select the remedy, design the remedy and implement the remedy. Unless an interim remedy is implemented first, the surface water run-off from the Site would present continued risks until the remedy for Site soils has been implemented.

EPA believes that the surface water run-off problem should be addressed first, since EPA is now in a position to address the hazards presented by the surface water run-off from the Site. While the interim remedy is proceeding, EPA would not slacken its efforts to achieve a final remedy. Once the final remedy for site soil has been implemented, surface run-off from the Site would no longer be contaminated by contact with Site soils. Therefore, the surface water remedy is considered to be an interim measure which would no longer be needed once the Site soils have been cleaned up.

COMMENT: One resident asked what type of capping system would be used and how effective would it be.

RESPONSE: If an impermeable surficial capping system was implemented, it would probably consist of a multi-layer cap with a synthetic membrane or a sprayed-on lining, together with protective layers, such as textile fabrics. Standard landfill caps are intended to be effective for thirty years or more. However, the capping system recommended by EPA for the CIC Site would only be needed for the duration of the interim remedy (probably less than eight years). This capping system would have fewer layers than the standard landfill caps. Therefore, the capping system would allow easier access to collect any soil samples required for a treatability study, and would be easier to remove once the final remediation plan was implemented.

COMMENT: A resident inquired whether capping systems have been used on other sites and, if so, how effective they were.

RESPONSE: Surficial caps have been employed at a number of sites such as hazardous waste landfills and municipal landfills. This technology has proven quite effective over time periods similar to that contemplated for this interim action in preventing the migration of contamination in the past.

COMMENT: One resident noted that there would be a large quantity of run-off if a surficial cap were installed on CIC's six acre lot. The resident wanted to know what type of storage capacity EPA has planned to accommodate the large volume of accumulated run-off.

RESPONSE: A detention structure would be constructed in the northeast corner of the Site to regulate the flow of discharge so that the remedy would not cause any adverse flooding impact. As part of the remedial design for Alternative 2, a drainage analysis would be performed. The size of the detention structure and the details of any other measures needed to avoid flooding impact (e.g., improvements in area storm drains), would be based on that drainage analysis. The detention structure for Alternative 2 would not necessarily be designed to detain the precipitation from a once in twenty-five year storm event.

COMMENT: A resident asked if Alternative 2 was selected, when would EPA expect the surficial cap to be installed.

RESPONSE: Work could begin on capping the Site approximately six months following finalization of the ROD for this interim action. The remedial design would be performed during those six months.

COMMENT: Several residents wanted to know if EPA had tested the vegetation at the Site for contamination, and if EPA plans to remove the vegetation in the near future in order to avoid migration of the contaminants in wind-blown vegatative matter.

RESPONSE: Vegetation on the Site has not been tested for contamination. However, based on the off-site soil sampling, it does not appear that there has been any significant migration of contaminants by wind-blown vegatative matter. The vegetation on the Site serves to prevent erosion of the highly contaminated soil. Therefore, EPA does not plan to remove the vegetation until the grading is done at the Site.

COMMENT: One resident asked how EPA plans to reduce the amount of soil and dust disturbance at the Site when grading is performed.

RESPONSE: Soil and dust migration would probably be minimized by wetting the Site. EPA has considered using a surfactant solution to wet the Site. In addition, a wind fence could be installed to avoid excess soil disturbance by wind. This problem has been addressed at previous sites and air emissions have been kept under control.

COMMENT: The same resident asked if air emissions would be monitored while the cap is being constructed.

RESPONSE: There would be air monitoring during construction at the Site. Methods for controlling air emissions will be developed in detail during the Remedial Design.

COMMENT: One resident asked whether air sampling results showed any detectible levels of contaminants.

RESPONSE: The test results indicated that the air contained low concentrations of contaminants. These concentrations were significantly below the permissible exposure limits (PELs) and threshold limit values (TLVs) established by the Occupational Safety and Health Administration (OSHA) and the American Conference of Governmental Industrial Hygienists (ACGIH), respectively.

COMMENT: One resident wanted to know what laboratory facilities EPA used to analyze samples collected during the focused RI/FS.

RESPONSE: Analyses were performed through EPA's Contract Laboratory Program (CLP). Numerous laboratories participate in the program. Approximately 65 laboratories were involved in analyzing the samples from the CIC Site. (A list of the laboratories that analyzed the samples is provided in Appendix D.)

COMMENT: A resident asked if EPA had conducted tests on the neighboring residential areas.

RESPONSE: Residential areas were tested extensively for dioxin from 1983 through 1985. No levels of dioxins above EPA's action level (1 ppb) were found outside of the CIC property. There have been no tests conducted on residential properties during the recent RI for the CIC Site. However, tests performed on adjacent industrial properties during the RI indicated that site-related contamination of residential properties is highly unlikely.

COMMENT: Several residents asked if EPA planned to conduct health studies and environmental tests in the neighboring residential areas to the CIC Site.

RESPONSE: At this time, no health studies or environmental tests in residential areas are planned. As part of Superfund procedure, the Agency for Toxic Substances and Disease Registry (ATSDR) has been consulted regarding the CIC Site, and has not recommended health studies. ATSDR is in the process of reviewing the RI results, and may recommend health studies in the future.

COMMENT: One resident asked EPA to define ARARs and to briefly explain how they were derived. Several residents wanted to know how ARARS applied to the CIC Site.

RESPONSE: "ARARs" stands for applicable or relevant and appropriate requirements of State and Federal environmental laws (other than the Superfund Law). Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (the Superfund Law) requires that, with limited exceptions, a remedy selected under the Superfund Law attain all ARARs that pertain to that remedy. In the case of the CIC Site, ARARs that pertain to the interim action to control surface water run-off, include the following concentration limits for the run-off leaving the Site:

Contaminant	ARAR (ug/l)
4,4 - DDT	0.001
4,4 - DDD	0.001
Dieldrin	0.0019
Gamma BHC (lindane)	0.08
Arsenic	50.0

Other ARARs for the interim action have also been identified in the focused RI/FS report.

Soil and groundwater ARARs exist for some of the contaminants detected at CIC. Arsenic, pesticides and herbicides, found in surface soil, soil boring, and groundwater samples significantly exceeded the available ARARs. However, attainment of the ARARs

for soil and groundwater is outside the scope of this interim action, but will be addressed by future cleanup decisions and actions.

COMMENT: Have air samples indicated that air pollution from the Site may be a threat to the community?

RESPONSE: OSHA guidelines provide a context for evaluating concentrations of contaminants detected in air filter samples from the air monitoring program. OSHA has established permissible exposure limits (PELs) which define allowable exposure levels for specific occupational settings. A PEL is available is arsenic (0.5 mg/m^3). The site-related contaminants for the threshold limit values (TLVs), generated by ACGIH, are DDT (1.0 mg/m^3) and arsenic (0.2 mg/m^3). In comparison with these criteria, the measured concentrations of arsenic and DDT found in the samples taken from the CIC Site were five orders of magnitude below the OSHA and ACGIH standards.

Although the OSHA and ACGIH standards were intended to protect workers in occupational settings, EPA believes that the fact that air concentrations were far below these standards indicates that site-related air pollution is not a significant threat.

COMMENT: A resident noted that OSHA standards apply to occupational settings; therefore, exposure to contaminants would therefore be limited to an 8 hour day. The citizen wanted to know if local residents are in greater danger because they are exposed to contaminants longer than the 8 hour/day OSHA standard.

RESPONSE: It would usually be inappropriate to apply OSHA standards to residential areas because residents would be exposed to contaminants for a longer period of time than workers, and because certain residents, such as children, may be more susceptible than most workers. However, EPA believes that OSHA standards could be of use when evaluating the health risk for residents because the concentration of contaminants is significantly reduced as a result of the distance between the CIC Site and residential areas. Also, see the previous response for further information.

COMMENT: A resident wanted to know if EPA conducted a risk assessment during the focused RI.

RESPONSE: A complete RI report, which contains a risk assessment section, was submitted to EPA as a draft document by EBASCO. EPA is currently reevaluating the risk assessment calculations and incorporating more recently developed cancer potency factors not included in the original assessment. Therefore, EPA has not

released the risk assessment results as yet. Although the risk assessment has not been finalized, EPA would discourage anyone from using Mill Brook or the unnamed tributary for recreational purposes.

COMMENT: A resident asked if there was a risk of developing cancer from being exposed to the contaminants near the facility, or from swimming in Mill Brook or the unnamed stream.

RESPONSE: The RI data indicates that site-related soil contamination is limited chiefly to the CIC property and the easement area. Since access to these areas is controlled, there is currently not a significant risk of human exposure to these contaminated soils.

Given that arsenic is a human carcinogen and that there are several potential human carcinogens in the surface water run-off from the Site, there may be an increased likelihood of developing cancer associated with wading or swimming in Mill Brook or the unnamed stream. Preliminary risk calculations indicate that the likelihood of developing cancer may be increased as a result of wading in these streams by a factor between 1×10^{-6} and 1×10^{-5}. A 1×10^{-6} (one in a million) cancer risk factor means that, if a population of one million people is exposed to a carcinogen under specified conditions, then it is estimated that one person would be likely to contract cancer above and beyond those who would have contracted cancer due to other causes. A 1×10^{-6} cancer risk is often accepted by EPA as a goal for cleanups to attain.

It should be noted that the preliminary risk calculations represent the risk of wading 216 times over a lifetime, not the risk of one wading incident. It should also be noted that the calculations were based on contaminant concentrations which were not measured during, or shortly after, the occurrence of run-off from the CIC Site. Substantially higher concentrations could occur after a site run-off occurrence.

COMMENT: A resident asked who is going to pay for the cleanup.

RESPONSE: EPA has paid for the RI/FS using Federal Superfund monies. The Superfund Law makes parties that are responsible for the contamination liable for the costs of cleaning up Superfund sites. CIC, which was responsible for the contamination at the Site, went bankrupt in 1970 and is no longer in existence. EPA has notified Mr. Arnold M. Livingston, the former president of CIC, that he may be personally liable. However, EPA does not believe that Mr. Livingston is financially capable of cleaning up the Site, which is a multi-million dollar task. Therefore, EPA believes that the cost of cleanup will be paid chiefly by the Federal and State governments, in accordance with the funding requirements of the Superfund Law.

COMMENT: One resident wanted to know whether, if a responsible party was paying for the cleanup, EPA would have chosen a final remedy instead of proceeding with the interim remediation alternatives.

RESPONSE: The source of funds for the cleanup work was not a factor in EPA's decision to select an interim remedy to control surface water run-off.

COMMENT: One resident asked if the herbicide, Dinoseb, which was produced at the CIC Site and contaminated the run-off at the Site, was the same type of herbicide used in Agent Orange.

RESPONSE: The herbicides used in Agent Orange were chlorinated herbicides. Dinoseb is not a chlorinated herbicide. The two active ingredients in Agent Orange have been found in samples taken from the Site. Site files indicate that CIC handled the chemicals used in Agent Orange at the Site but that CIC did not manufacture them at the Site.

COMMENT: A resident wanted to know if the CIC Site was located on wetlands.

RESPONSE: Contrary to an erroneous statement made by an EPA representative at the public meeting, approximately one acre of the CIC Site is located on wetlands. These on-site wetlands would be temporarily impacted during the interim remedial action. However, EPA will restore the wetlands, or, if that is not feasible, mitigate the impacts to wetlands when final remediation of the Site is implemented.

COMMENT: What future plans do the current owners have for the CIC Site.

RESPONSE: The current owners have been very cooperative with EPA. The present owners are not likely to make any use of the Site until the cleanup work makes it safe to do so.

COMMENT: Several residents were concerned that they be kept adequately informed of future developments, remedial plans, or tests performed at the Site.

RESPONSE: The informational repositories designated for the CIC Site contain the focused RI/FS, PRAP, fact sheets and other documents. The Responsiveness Summary and the ROD will also be placed in the repositories. There is also a two volume report of sampling results that is available for review at the repositories. EPA has also utilized letters to area citizens, a press release and a public notice in the newspaper to inform the public about EPA activities concerning the Site.
EPA will continue its efforts to keep the community informed of developments related to the CIC Site.

COMMENT: Several residents wanted to know if CIC has been placed on the National Priorities List (NPL) as a Superfund site, or if it is a proposed Superfund site.

RESPONSE: The CIC Site has not officially been placed on the NPL. EPA Region II has submitted a proposal to EPA Headquarters in Washington D.C. to include the Site on the NPL. A Site can qualify for the NPL if it has a hazard ranking score higher than 27. The CIC Site has a preliminary ranking score of 37. CIC's score ranks considerably higher than many of the sites presently listed on the NPL. If the recommendation is accepted, the Site would be proposed for the NPL in the next Federal Register announcement concerning NPL listing, which is scheduled for publication this fall.

Even if the Site has not been placed on the NPL at the time that the construction of the interim remedy is to begin, funding the interim remedy with Superfund monies would still be a possibility. A portion of the Superfund is designated for cleanup work at non-NPL sites.

IV. WRITTEN COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES TO THESE COMMENTS.

This section contains the one letter received by EPA containing written comments, as well as EPA's written response to that letter.

August 28, 1989

Jonathan Josephs
Remedial Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza, Room 747
New York, New York 10278

Re: Chemical Insecticide Corp., Edison, New Jersey

Dear Mr. Josephs:

On August 19, 1989 neighbors and concerned citizens met to discuss the matter of the Chemical Insecticide Corporation Superfund site, (CIC), located on Whitman Avenue in Edison New Jersey. We have the following questions and concerns which we would like put on public record, addressed in the selection of the remedial measures to be instituted for the site and answered by your office.

The following past effects have not been addressed.

How much and what types of contaminants were onsite and have spread off the site?

What effects did these contaminants have on the workers of the factory, the community and the surrounding land and animals?

What are the present problems with the site?

Is the onsite contamination level dangerous to an unprotected person on the site?

Is there currently an active transport of the contaminants off the site via air or water? If so, are the surrounding human and animal population currently exposed to contamination from the site?

Do you think we should consult a doctor about possible adverse effects? If so, what tests should be performed?

The EPA should perform offsite sampling to determine if there is offsite contamination and the extent and type of that contamination. In addition, a study should be performed concerning the affects of the (CIC) operation and this superfund site on the former employees of the Chemical Insecticide Corporation and the past and current residents of the area.

We feel the airborne sampling during the remedial investigation (RI) was inadequate for the following reasons:

1. The standards applied to the small amount of air data collected are work place standards and are not to be used as environmental standards.

2. The airborne samples may have been collected during optimum dust generation conditions but the activities onsite during sampling did not generate a relatively large amount of dust. The air monitoring data does not even approximate a worst case analysis as would be evidenced during the stripping, grading and contouring of the site.

The EPA's "preferred" alternative (#2) is not acceptable to us. Capping the land will generate high amounts of airborne contaminants during its installation. The cap will hide the real problem, it will be costly to install and maintain, and is not reliable to do the job it is designed for.

The other alternatives that have been proposed do not address the real problem which is the contamination on the land that is the Chemical Insecticide Corporation site. Alternatives # 2, 3 and 4 only address the water running off the site. There are no alternatives that address the actual cleanup of the site.

During the installation of any remedial measures the disturbance of the site should be kept to a minimum. When the site is disturbed, standard operating procedures and dust prevention controls should be implemented to prevent airborne contaminants. We saw no mention of emergency or contingency plans.

The lack of security at the site is a major concern. At present, the only signs posted are rusted over so one cannot even decipher that this is a hazardous area, quite unlike the EPA slide of the site which was quite clear and unfortunately misleading. The public should be informed of the potential risks. You could utilize your mailing list to increase awareness. Unfortunately most of the residents were unaware of the EPA public meeting due to untimely and inadequate announcements with no visible press release. Improvement in your public relations and education would increase the chances of selecting an alternative acceptable and understandable to a majority of the public.

Do you have more information on the responsible parties? Is there a way for private citizens to take legal action against the responsible parties to recover the costs of cleanup?

We are concerned about the past, present and future impact of the site on the community, our children, the land, animals and the values of homes. We would like an expeditious response to our letter. We feel that appropriate vehicles for response would include written responses to each of us, those on your mailing list and in your required summary of all public comments concerning this matter.

We look forward to your timely response and continued cooperation.

Sincerely,

Matthew A Reilly
Matthew Reilly
3 Terrill rd, Edison, NJ 08817

Jeff V. Skund
Sign w/ Sheriff
2 Terrill Road Edison NJ

Carol Bernad

271 Newman St
Metuchen, N.J. 08840

C. Damian Spears
Carol Spears
275 Newman St.
Metuchen, NJ 08840

Donald P. O'Neill
311 Rose St.
Metuchen NJ

Pat O'Neill
311 Rose St.
Metuchen, N.J.

Gail E. Toth
305 Rose St.
Metuchen, NJ.

Donald Toth
305 ROSE St
Metuchen, NJ

Shirley Stempinski
279 NEWMAN ST
METUCHEN NJ

Stephen Stempinski
279 NEWMAN ST
METUCHEN NJ.

Carol Dalyga-Puchalski
265 Rose St.
Metuchen, N.J. 08840

cc: Township of Edison
Borough of Metuchen

Reproduced from best available copy.

Bennett & Rosalie Abrams
266 Newman St.
Metuchen, NJ 08840

Egidio Laguna
283 Newman St.
Metuchen NJ 08840
Ayala R. Laguna
283 Newman St.
Metuchen, NJ 08840

Patricia Frazier
101 Cleary Ave.
Metuchen, N.J. 08840

Eleanor Zampetti
65 High Street
Metuchen, N.J. 08840

Betty Ann Kirkman
14 Poets Lane
Metuchen, N.J. 08840

Reproduced from best available copy.

C/O Matthew Reilly
3 Terrill Road
Edison, New Jersey 08817

Fold at line over top of envelope to the right of the return address

CERTIFIED

P 122 928 313

MAIL

PRINCETON, NJ SEP 1 1989 USPS

U.S. POSTAGE 2.00

747-2

Mr. Jonathan Josephs
Remedial Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza, Room 747
New York, New York 10278

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

SEP 26 1989

See Address List

Re: Your August 28, 1989 Letter Concerning the
Chemical Insecticide Corporation Site in Edison, New Jersey

Dear :

Thank you for the August 28, 1989 letter which you and other concerned citizens wrote to express your questions and comments concerning the Environmental Protection Agency's Proposed Plan for an interim remedial action at the Chemical Insecticide Corporation Site. The concerns expressed in your letter have been reviewed by appropriate Environmental Protection Agency staff, by Ebasco Services personnel who worked on the Remedial Investigation and Feasibility Study for the site, and also by an Agency for Toxic Substances and Disease Registry representative assigned to the EPA Region II office. A response to the questions and comments expressed in your letter has been prepared, incorporating information obtained from the reviewers mentioned above. A copy of this response is enclosed and is being be sent to each of the signers of the August 28 letter. Copies of both the August 28 letter and EPA's response will also be placed in the information repositories for the Site.

EPA will keep you informed of our progress regarding the Chemical Insecticide Corporation Site, including the decision regarding the selection of an interim remedial action. I appreciate your interest and participation in the Superfund program.

Sincerely yours,

Jonathan Josephs
Chemical Engineer
New Jersey Compliance Branch
Emergency and Remedial Response Division

ADDRESS LIST

Matthew A. Reilly and
Maureen Reilly
3 Terrill RD
Edison, NJ 08817

Jeff V. Sheard and
Lynn M. Sheard
2 Terrill Road
Edison, NJ 08817

Carol Berman
271 Newman Street
Metuchen, NJ 08840

C. Damian Spears and
Carol Spears
275 Newman Street
Metuchen, NJ 08840

Donald O'Neill
311 Rose Street
Metuchen, NJ 08840

Pat O'Neill
311 Rose Street
Metuchen, NJ 08840

Gail E. Toth
305 Rose Street
Metuchen, NJ 08840

D. S. Toth
305 Rose Street
Metuchen, NJ 08840

Shirley Stempinski
279 Newman Street
Metuchen, NJ 08840

Stephen Stempinski
279 Newman Street
Metuchen, NJ 08840

Carol Puchalski
265 Rose Street
Metuchen, NJ 08840

Bennett & Rosalie Abrams
266 Newman Street
Metuchen, NJ 08840

Elyidio Laguna
283 Newman Street
Metuchen, NJ 08840

Asela R. Laguna
283 Newman Street
Metuchen, NJ 08840

Patricia Frozier
101 Essex Avenue
Metuchen, NJ 08840

W. Zampetti
65 High Street
Metuchen, NJ 08840

Betty Ann Kirtman
14 Poets Lane
Metuchen, NJ 08840

EPA RESPONSE TO THE AUGUST 28, 1989 WRITTEN COMMENTS REGARDING THE CHEMICAL INSECTICIDE CORPORATION SITE IN EDISON, NEW JERSEY

The August 28, 1989 written comments regarding the Chemical Insecticide Corporation Site have been summarized below, together with and EPA's responses to these comments.

COMMENT: How much and what types of contaminants were on-site and have spread off-site?

RESPONSE: The types of contaminants linked to the Site were discussed at the August 10, 1989 public meeting and summaries of the analytical data were presented. Unfortunately, the slides that were projected were not very clear. The chief contaminants are arsenic, pesticides (DDT, lindane, chlordane, dieldrin, etc.), herbicides (e.g., 2,4,5-T, 2,4-D and dinoseb) and dioxin. Summaries of this data, which provide concentration values for the measured contaminants in the different media sampled, can be found in Exhibits 1-12 through 1-24 of the Focused RI/FS Report. The results for on-site and off-site samples have been summarized separately in these exhibits. The complete set of sampling data, together with maps showing the sampling locations, can be found in the two-volume document containing the "Remedial Investigation Field Data: Validated Laboratory Results" (Ebasco, July 1989). These documents are available in the information repositories for the Site. Because of the volume of this information, it is not practicable to present it here.

COMMENT: What effects did these contaminants have on the workers of the factory, the community and the surrounding land and animals?

RESPONSE: There is little information currently available to EPA indicating any effects of the contaminants on the CIC employees, the area residents and animals. In the 1960's several cattle were alleged to have died as a result of drinking arsenic contaminated water downstream of the factory. However, the levels of arsenic found at the downstream sampling locations during the Remedial Investigation are much less than those associated with such acute effects. In all likelihood, the arsenic concentrations were much higher during the period when the Chemical Insecticide Corporation was operating and the cattle deaths occurred.

As noted at the public meeting, sampling results from the Remedial Investigation and other studies indicates that contamination of the land around the CIC property by arsenic, pesticides and herbicides is chiefly limited to the easement area immediately east of the CIC property. In addition, soil concentrations of dioxin off of the CIC property have all been

below the one part per billion action level recommended by the Centers for Disease Control for residential areas.

COMMENT: Is the on-site contamination dangerous to an unprotected person on the Site?

RESPONSE: Yes, although the degree of danger will depend on the duration and frequency of on-site exposure and the type of activities that the person conducts while on-site. Merely standing or walking on-site for a short period of time would not present a significant risk. On the other extreme, the long-term ingestion of groundwater from beneath the site would present risks far outside of the range of risks generally accepted by EPA. Also, it should be noted that the reliance on other sources of drinking water and the current restricted access to the Site prevent such high risk exposures.

COMMENT: Is there currently an active transport of the contaminants off the Site via air or water? If so, are the surrounding human and animal populations currently exposed to contamination from the Site?

RESPONSE: The air monitoring results indicate that air transport of hazardous substances is not a problem under the present conditions. Off-site transport by surface water run-off is an active transport route following heavy precipitation events. Transport of contaminants by groundwater is also an active route, but one which is much slower than the surface water route. This is because of the slower flow of groundwater, compared to surface water flow, and because many of the contaminants tend to be adsorbed from the groundwater onto the soil. Humans and animals are exposed to the surface water transported contaminants since access to the unnamed stream and Mill Brook is not restricted. The possibility of another overflow from the drainage ditch onto the Metroplex property also cannot be ruled out.

COMMENT: Do you think we should consult a doctor about possible adverse effects? If so, what tests should be performed?

RESPONSE: A doctor should be consulted if one experiences symptoms of illness and for routine medical examinations. In the event of illness, it may be useful to inform the doctor about the patient's potential exposure to the contaminants from the CIC Site. This information may assist the doctor in determining the appropriate tests, along with other factors such as the nature of the illness.

COMMENT: EPA should perform off-site sampling to determine the extent and nature of the off-site contamination.

RESPONSE: As part of the investigations of the CIC Site and as part of a separate investigation of the Muller Machinery

property, extensive sampling of the industrial properties surrounding the CIC property has been conducted. This sampling indicates that the CIC related contamination of soils is limited chiefly to the CIC property and the adjacent easement area. Contamination has migrated a greater distance in the Mill Brook sediments, but there are no indications that Site-related contaminants have migrated from the industrial areas to residential areas. Therefore, EPA does not plan to perform additional sampling of off-site industrial or residential areas at this time.

COMMENT: EPA should perform a study to determine the effects of the Site on the former Site employees and on the past and current area residents.

RESPONSE: The Agency for Toxic Substances and Disease Registry (ATSDR), the Federal agency charged with performing epidemiologic studies under the Superfund law, has been consulted by EPA regarding the CIC Site. ATSDR has not recommended a health effects study for the Site. However, ATSDR is in the process of reviewing the RI results and may recommend a health effects study in the future.

COMMENT: The writers feel that the remedial investigation air sampling was inadequate because 1) the results of the sampling were compared to workplace standards, which were not intended as environmental standards, and 2) the results are not comparable to the air contamination which would occur during the stripping and grading of the Site during remediation.

RESPONSE: EPA's judgement that air contamination from the Site is currently not a problem is not due only to the fact that the measured levels of air pollutants were less than these standards, but because the levels are more than one-thousand times less and because the pollutants would be further diluted by the surrounding air in migrating off-site.

EPA agrees with the writers that the results are not reflective of conditions that would occur during Site remediation. EPA's judgement that stripping and grading of the Site would not cause adverse air emissions was based on other information, as described in the response to the following comment.

COMMENT: The writers state that EPA's preferred remedy is unacceptable to them because 1) it will generate high amounts of airborne contaminants during installation, 2) the cap will hide the real problem, 3) it will be costly to install and maintain, and 4) it is not reliable to do the job it is designed for.

RESPONSE: 1) EPA does not agree that the installation of the preferred remedy will generate high amounts of airborne contaminants. EPA has performed cleanup actions at other sites

which involved extensive excavation of contaminated soils (for example, the excavation of contaminated creek sediments at the Love Canal Site in Niagara Falls, NY and the cleanup of the Krysowaty Farm Site in Hillsborough, NJ). Those actions had much greater potential to generate airborne contaminants than the proposed stripping and grading at the CIC Site, which would involve comparatively little soil disturbance. Yet, those actions were performed in a manner which protected the public from air emissions. As further described in later responses provided below, the grading and stripping would be done using dust suppression methods. In addition, an air monitoring program would be in place to identify any adverse air quality impacts and a contingency plan for responding to air quality problems would be developed and implemented. 2) EPA believes that the cap would eliminate one real problem (surface water run-off) while EPA continues its efforts to develop solutions for the remaining real problems. As stated at the public meeting, EPA is planning to perform treatability studies to identify the most appropriate remedial technologies for cleanup of the Site soils. The soil contamination problem is considerably more complex and will take considerably more time to remedy than the surface water run-off problem. In view of the fact that EPA can take action now to stop the one threat from the Site which presents the most immediate risk, EPA has elected to do so, rather than to leave the storm water run-off problem unabated until a complete Site cleanup can be performed. 3) While the cap is costly to install and will have some maintenance costs, it is a cost-effective remedy by Superfund standards, given the costs and associated benefits for most remedial actions selected by EPA. 4) EPA believes that the cap can be designed to do the job for which this remedy is intended (that is, to reliably control the surface water run-off problem until a complete remedy of the Site can be implemented).

COMMENT: The other alternatives that EPA has considered also fail to address the entire cleanup of the Site, but are limited to addressing the problem of surface water run-off.

RESPONSE: This comment is accurate. As stated previously above, future remedial measures are planned to address the remainder of the Site cleanup.

COMMENT: During the installation of any remedial measures, the disturbance of the site should be kept to a minimum. When the Site is disturbed, dust prevention controls should be implemented. The writers saw no mention of emergency or contingency plans.

RESPONSE: EPA intends to minimize the generation of airborne contaminants during the implementation of the remedial action. Attempts will be made to minimize Site disturbance to the extent that this can be done while effectively implementing the remedial

alternative that is selected. Methods to minimize air emissions (such as soil wetting, wind screens and, if needed, a tent-like enclosure over the work area) would be utilized to protect air quality. In addition, air monitoring will be conducted during the remedial work to confirm that air quality is acceptable, both for on-site workers and for persons off-site.

Contingency planning is a routine part of any Superfund remedial action. Typically, contingency planning includes:

- the identification of an emergency response coordinator and chain of command to ensure that the contingency plan is carried out
- the identification of the emergency response equipment (e.g. fire extinguishers, first aid equipment, etc.) which must be on hand, as well information concerning its use and maintenance
- the emergency response arrangements with police, fire department, hospitals and other emergency response authorities
- the definition of the conditions requiring implementation of the plan, for example, the criteria for unacceptable air impacts

The details of the contingency plan, which may be a part of the Site health and safety plan, may depend on the nature of the remedy that is selected. Those detailed plans would be developed during the remedial design of the selected remedy.

COMMENT: The lack of security at the Site is a concern to the writers, as is the condition of the warning signs which are rusted and difficult to read.

RESPONSE: EPA will soon add new warning signs and ensure that they remain readable. With the added signs, EPA believes the existing fence will provide adequate security.

COMMENT: The public should be kept better informed about the Site. The public meeting announcements were untimely and inadequate, and there was no visible press coverage.

RESPONSE: EPA agrees that the public meeting announcement fliers should have been prepared and distributed earlier. In the future, EPA will strive to time the distribution of its fliers to provide sufficient advance notice. However, the distribution of fliers was only one method used by EPA to notify the public about the public meeting. A public notice announcing the public meeting was published by EPA in the New Brunswick Home News on August 3, 1989. In addition, on July 28, 1989 EPA sent press releases to the Home News, the Newark Star Ledger, the Metuchen-Edison Review and the Woodbridge News Tribune, as well as to those individuals and organizations on the mailing list for the

Site. EPA is aware that at least one of these papers printed a news story concerning EPA's proposed plan for the Site and the scheduled public meeting (an August 9, 1989 article in the New Brunswick Home News). As a result of the increased community interest in the Site resulting from EPA's Proposed Plan, the Site mailing list has been enlarged and more people will be informed of future Site activities.

COMMENT: Is there more information on the responsible parties? Is there a way for citizens to take legal action against responsible parties to recover costs of cleanup?

RESPONSE: The Chemical Insecticide Corporation went bankrupt in 1970 and is no longer in existence. Only one party has been given written notice of his potential liability with respect to the CIC Site. That party is Mr. Arnold M. Livingston, 50 Division Avenue, Millington, NJ 07946. Mr. Livingston was formerly the president of the Chemical Insecticide Corporation.

The Superfund law does not limit any rights that a private party may have under common law or under other state and Federal statutes. However, it does not provide an injured party with rights against a responsible party, unless that injured party is the object of a Federal enforcement action under the Superfund law. Citizens may wish to consult an attorney about their rights under common law, state law and Federal statutes other than the Superfund law.

COMMENT: The writers feel that EPA should expeditiously prepare a response to their letter, directing it to each of them and to those on the Site mailing list. EPA's response should also be included in the required responsiveness summary.

RESPONSE: EPA intends to send a response to each of the writers and to include the response in the responsiveness summary. Any other interested persons may review this material in the Site information repositories.

APPENDIX A
PROPOSED REMEDIAL ACTION PLAN

Superfund Program
Proposed Plan

EPA
Region II

Chemical Insecticide Corporation Site
Edison, New Jersey

August 1989

EPA ANNOUNCES PROPOSED PLAN

This Proposed Plan identifies the preferred option for controlling surface water runoff from the Chemical Insecticide Corporation (CIC) Site in Edison, New Jersey (Figure 1). In addition, the Plan includes summaries of other alternatives analyzed for addressing the surface water runoff problem at this site. This document is issued by the U.S. Environmental Protection Agency (EPA). EPA, in consultation with the New Jersey Department of Environmental Protection (NJDEP), will make a final decision for the site only after the public comment period has ended and the information submitted during this time has been reviewed and considered.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This document summarizes information that can be found in the focused Remedial Investigation and Feasibility Study (RI/FS) report and other documents contained in the administrative record file for this site. EPA and the State encourage the public to review these other documents in order to gain a more comprehensive understanding of the site and Superfund activities that have been conducted there. The administrative record file, which contains the information upon which the selection of the response action will be based, is available at the following locations:

Edison Township Municipal Complex
100 Municipal Boulevard
Edison, New Jersey 08817
(201)287-0900
Mon-Fri: 9 a.m. to 4 p.m.
and
U.S. Environmental Protection Agency
26 Federal Plaza
New York, New York 10278
(212)264-8676
Mon-Fri: 9 a.m. to 4 p.m.

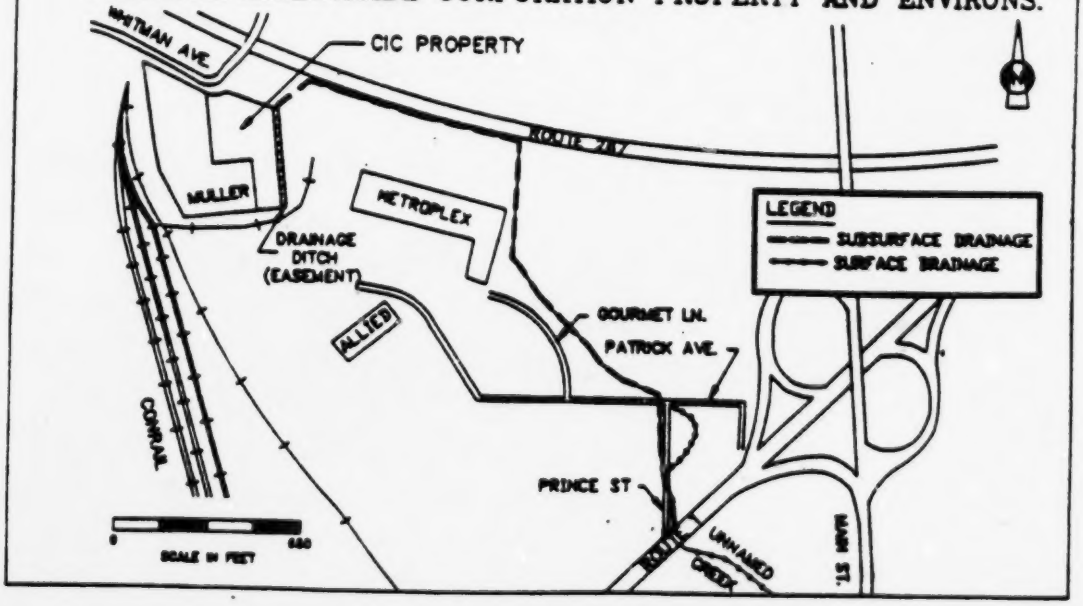
EPA, in consultation with the NJDEP may modify the preferred alternative or select another response action presented in this Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified here.

DATES TO REMEMBER
MARK YOUR CALENDAR

August 8 - 24, 1989
Public comment period on remedies to control surface water runoff from the site.

August 10, 1989 at 7 p.m.
Public meeting at Edison Township Municipal Complex Auditorium

FIGURE 1
CHEMICAL INSECTICIDE CORPORATION PROPERTY AND ENVIRONS.



SITE BACKGROUND

Over the period that Chemical Insecticide Corporation occupied the property at 30 Whitman Avenue in Edison, NJ (1958-1970), various pesticide, herbicide and insecticide formulations were produced and stored on the property. Over the period of CIC operations, the Edison Department of Health and Human Resouces (EDHHR) became concerned with activities on the site due to numerous neighborhood complaints of site odors, documented offsite discharges and releases, and the frequency of onsite fires. EDHHR ordered cessation of discharges of wastewater (1966 and 1969), oversaw the disposal of leaking drums to eliminate an odor problem (1966), and required the closing of two onsite lagoons (1966). CIC was declared bankrupt in 1970. The property was purchased in anticipation of future development by Piscataway Associates who demolished the production facilities on the site (1975), leaving only concrete building foundations and asphalt roadways.

Triggered primarily by the potential for the presence of dioxin (a contaminant generated in the production of 2,4,5-trichlorophenoxyacetic acid, an herbicide which was handled on the premises), both NJDEP and EPA performed onsite and offsite field investigations at CIC, testing soils and surface water for dioxin (1983). In 1984, NJDEP further sampled onsite and offsite soils for the presence of other pollutants.

Based upon the analytical results from these investigations, EPA Region II authorized a remedial investigation/feasibility study (RI/FS) at the site. Onsite and offsite RI field investigations were performed over the period July 1987 through March 1988. Validated data from physical and chemical samples collected during the field activities and quantified in analytical laboratories are available in the CIC Site Repository in the Edison Township Municipal Complex.

Observations made during the RI field activities and an EPA removal action required to control site run-off onto the parking lot of the adjacent Metroplex property (March 1989) indicate that surface run-off from the CIC property may occur in early spring as the result of heavy precipitation falling on soils which are still frozen, causing offsite runoff of rainwater and/or melting snow which has contacted contaminated soils on the site. Additionally, the potential exists for offsite surface run-off during either extended or extreme rainfall events over the remainder of the year.

SCOPE AND ROLE OF ACTION

The CIC site, as characterized in the RI field investigations, is extremely complex, due to the number and variety of contaminants present, the concentrations of contaminants documented, and the physical and geological characteristics of the site. The specific combination of chemical contaminants at the CIC site (herbicides, pesticides and metals) will require performance of treatability tests prior to identification of alternatives to remedy the entire site. Preparation of an FS report which addresses all aspects of the CIC site requires performance of the proposed treatability tests and assessment of the results.

EPA is proposing an interim action to control surface water runoff from the CIC site until the time the FS addressing all aspects of the CIC site is finalized and the resulting Record of Decision (ROD) implemented. EPA's Proposed Plan identifies a preferred alternative, based on the focused RI/FS, which evaluated interim actions to control surface water runoff from the CIC site intended to protect human health and the environment.

SUMMARY OF SITE RISKS

Based on results of the analysis of surface water samples collected and and near the site, it was determined that surface water run-off from the CIC site is potentially contaminated with selected pesticides (DDT, DDE, Dieldrin and Lindane), herbicides (including Dinoseb) and metals (particularly arsenic). DDT/DDD/DDE, the hexachlorocyclohexane isomers (BHCs, e.g., Lindane) and arsenic are all considered potential human carcinogens. Chronic exposure to these pesticides (DDT and its metabolites, DDE and DDD, and the BHCs) has been associated with a number of adverse systemic effects, including liver and central nervous system disorders. Arsenic is also considered a human carcinogen with evidence most compelling for inhalation exposures. The chlorinated herbicides and Dinoseb, though not considered carcinogenic to humans, have been associated with adverse reproductive effects in both humans and laboratory animals.

In addition to the adverse toxicological characteristics discussed above, CIC-related contaminants also have physical/chemical characteristics which warrant concern from an environmental standpoint. For example, the chlorinated pesticides (DDT/DDD/DDE, chlordane and dieldrin) are persistent in the environment and absorb strongly to soils, sediments and organic matter. These compounds also exhibit significant bioaccumulation and are all highly resistant to biodegradation and/or biotransformation processes. Arsenic, one of the major contaminants detected at CIC, is typically persistent in the environment.

Recommended cleanup objectives for surface runoff quality selected for the interim action to control surface water runoff are based primarily upon New Jersey Pollutant Discharge Elimination System (NJPDES) regulations. The cleanup objective for Dinoseb is based upon the Safe Drinking Water Act Health Advisory since no criterion is identified for this contaminant under NJPDES regulations.

SUMMARY OF ALTERNATIVES

The alternatives analyzed for the interim action to control surface water run-off from the CIC site are presented below. These are numbered to correspond with the numbers in the focused RI/FS report which is available in the CIC site administrative record file in Edison and New York. The alternatives for run-off control are summarized below:

- Alternative 1: No Action
- Alternative 2: Site Grading/Surficial Cap Installation/Controlled Release of Uncontaminated Run-off
- Alternative 3: Site Grading/Run-off Collection/ Onsite Treatment/Discharge of Treated Water
- Alternative 4: Site Grading/Run-off Collection/ Transportation of Run-off to Offsite Treatment Facility

COMMON ELEMENTS. With the exception of the No Action alternative, the alternatives now being considered for the control of offsite surface water run-off include a number of common components including: site preparation and grading for control of run-on to and run-off from the site. The extent of site preparation for capping (Alternative 2) is slightly greater than either the onsite or offsite treatment alternatives (Alternatives 3 and 4) in order to assure a surface which will not adversely impact the cap during installation. Alternatives 2 through 4 include site grading to divert surface water run-on around the site and to enhance flow to effectively collect site run-off. Treatment options in Alternatives 3 and 4 differ chiefly in the location of the treatment units, onsite and offsite, respectively.

Alternative 1: NO ACTION

Capital Cost:	$ 0
Annual Operation and Maintenance (O&M) Costs:	$ 20,790
Present Worth (PW):	$134,366
Months to Design and Construct:	0

The Superfund program requires that the No Action alternative be evaluated at every site to establish a baseline for comparison. Under this alternative, EPA would take no further action at the site to prevent exposure to surface water run-off from the site but would continue to maintain existing controls in place at the site. Exisiting controls include the fences restricting access to both the CIC property and the contaminated drainage ditch which lies between the site and the Metroplex parking lot and warnings posted on the fence. The No Action alternative also includes periodic monitoring of onsite and offsite surface water and public information meetings to warn residents and workers of the potential hazards associated with the site.

Alternative 2: SITE GRADING/SURFICIAL CAPPING/CONTROLLED RELEASE OF UNCONTAMINATED RUN-OFF

Capital Cost:	$1,179,891
Annual O&M Costs:	$ 37,184
Present Worth (PW):	$1,420,211
Months to Design and Construct:	10

Major features of this alternative include: construction of a surface water run-on diversion system; clearing and grading the site; lining the entire site (including the contaminated drainage ditch near the eastern boundary of the CIC property) with a surficial cap; and controlled release of collected, uncontaminated surface water run-off from the site. Because the lining material (e.g., high density polyethylene) would be nearly impermeable to water, this alternative effectively eliminates contact of precipitation with the contaminated soils on the site.

Alternative 3: SITE GRADING/RUN-OFF COLLECTION/ONSITE TREATMENT/ DISCHARGE OF TREATED WATER

Capital Cost:	$3,138,443
Annual O&M Costs:	$ 212,007
Present Worth (PW):	$4,508,644
Months to Design and Construct:	24

Major features of this alternative include: construction of a surface water run-on diversion system; onsite containment and treatment of contaminated surface water; and discharge of the treated water. Onsite treatment would include process options to meet NJPDES criteria for surface discharge. Process options considered include (but are not limited to): activated carbon adsorption and ion exchange to treat the major contaminants of concern in the surface water run-off (pesticides, herbicides and metals). Options for surface discharge of treated run-off water include either the unnamed creek which flows into the Mill Brook or a permitted POTW.

Alternative 4: SITE GRADING/RUN-OFF COLLECTION/OFFSITE TRANSPORT AND TREATMENT

Capital Cost:	$ 2,393,066
Annual O&M Costs:	$ 2,551,300
Present Worth (PW):	$18,882,118
Months to Design and Construct:	18

Major features of this alternative include: construction of a surface water diversion system; temporary onsite storage of contaminated surface water; and trucking of contaminated surface water to a licensed treatment facility.

EVALUATION OF ALTERNATIVES

The preferred alternative for controlling surface water run-off from the CIC site is Alternative 2: Surface Grading/Surficial Capping/Controlled Release of Uncontaminated Run-off. Based on current information, this alternative would appear to provide the best balance of trade-offs among the alternatives with respect to the criteria that EPA uses to evaluate alternatives. This section profiles the performance of the preferred alternative against these criteria, noting how it compares to the other options under consideration. A glossary of the evaluation criteria is provided below:

GLOSSARY OF EVALUATION CRITERIA

- **Overall Protection of Human Health and Environment** addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment engineering controls or institutional controls.

- **Compliance with ARARs** addresses whether or not a remedy will meet all of the applicable or relevant and appropriate requirements (ARARs) of Federal and State environmental statutes (other than CERCLA) and/or provide grounds for invoking a waiver.

- **Long-term Effectiveness** and performance refers to the magnitude of residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met. Given that this is an interim action, effectiveness need only be maintained for the duration of the interim action, which is expected to be in the range of 3 to 8 years.

- **A substantial Reduction of Toxicity, Mobility, or Volume of Contaminants** at the site through treatment is the preferred result of technologies that may be employed in the remedy.

- **Short-term Effectiveness** refers to the speed with which the remedy achieves protection, as well as the remedy's potential to create adverse impacts on human health and the environment that may result during the construction and implementation period.

- **Implementability** is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement the selected alternative.

- **Cost** includes capital and operation and maintenance (O&M) costs.

- **State Acceptance** indicates whether, based on its review of the RI/FS and Proposed Plan, the State concurs with, opposes, or has no comment on the preferred alternative. This criterion will be addressed when State comments on the Proposed Plan are received.

- **Community Acceptance** will be assessed in the Record of Decision following a review of the public comments received on the RI/FS report and the Proposed Plan.

ANALYSIS OF ALTERNATIVES

- Overall Protection of Human Health and the Environment: Alternative 1 would continue to limit exposure to surface water contaminants by restricting access to the site and by warning local workers and residents of the risks they face by contacting the run-off. However, contaminated run-off would continue to migrate out of the restricted area to the unnamed creek and to Mill Brook. Alternatives 2 through 4 would protect both human and environmental receptors from contact with contaminants in the site run-off by eliminating or removing contaminants from the surface water run-off.

- Compliance with ARARs: No Action (Alternative 1) would not directly address contaminated surface water migrating from the site and, thus, would not satisfy the recommended clean-up objectives identified for the interim remedy. Alternatives 2, 3, and 4 would fully address the contaminated surface water problems at the site either by eliminating the contaminantion of the surface water by precluding contact with contaminated site soils (Alternative 2) or by treating contaminated surface water (Alternatives 3 and 4). Each of the three alternatives would attain all ARARs which pertain to the interim action.

- Long-Term Effectiveness: Alternative 1 is not effective in the long or short-term. Alternatives 2, 3 and 4 are each effective, once implemented, and each can maintain its effectiveness for the expected duration of the interim remedial action.

- Reduction of Toxicity, Mobility or Volume: None of the alternatives evaluated for the interim remedy provide significant reductions in the toxicity, mobility or volume of onsite contaminants. Although Alternatives 3 and 4 do involve the treatment of contaminants, the reductions would not be significant in terms of the overall site remediation. Measures to permanently reduce the quantities and threats associated with the contaminants will be evaluated in a subsequent FS which addresses the entire CIC site. Alternatives 2 through 4 reduce the toxicity and volume of contaminants in the surface water to satisfy the goals of the interim remedial action objectives.

- Short-Term Effectiveness: Alternative 1 presents the least short-term risks to onsite workers since construction is not a task required for implementing the No Action alternative. However, it will not reduce the existing risks. Alternatives 2, 3 and 4 each will require the execution of health and safety protection measures during the remedial construction to adequately protect workers which include appropriate protective clothing and respiratory protection. Health and safety measures to protect the community, such as dust suppression, will also be required. However, none of the alternatives present implementation problems which cannot be successfully addressed by available construction methods.

  The estimated time periods for design of the systems and periods for construction are as follows: Alternative 2, 6 months for design and 4 months to construct; Alternative 3, 12 months for design and 12 months to construct; and Alternative 4, 9 months to design and 9 months to construct. Therefore, Alternative 2 will remediate the run-off problem most quickly, followed by Alternatives 3 and 4, in that order.

- Implementability: The No Action alternative is the simplest alternative to implement from a technical viewpoint since it only involves actions to periodically inspect and sample the site, ensure restricted access to the site and continue to provide information about the site to the surrounding communities.

  The operations associated with Alternatives 2, 3 and 4 (e.g., clearing, grading, lining, excavation, surface water diversion and detention techniques, pipe construction, treatment plant construction) employ readily available and reliable operations and are thus technically feasible. Alternative 2 requires extensive site preparation for the impermeable liner. Alternatives 3 and 4 require coordination with several vendors to implement the associated collection, storage, transport and treatment tasks. Alternative 3 would require the greatest technical effort. Administrative efforts for the capping and treatment alternatives involve obtaining access to the easement adjacent to the eastern site boundary, potential relocation of utility lines, obtaining regulatory agency approvals, development of a traffic control plan, and inspection and maintenance of all site controls and systems. Additionally, Alternative 4, would require a manifesting system to track disposal of each tanker which transports the liquid waste. Each of the tasks listed above is implementable from both an administrative and a technical perspective.

- Cost: Alternative 1, No Action, has an estimated present worth cost of $134,366. The primary constituents of this cost are inspection, sampling, chemical analysis and public awareness programs. Present worth costs for Alternatives 2, 3 and 4 are: $1,420,211; $4,508,644; and $18,882,118; respectively. The major cost item for the capping system is the work associated with site preparation. The other two alternatives have the same costs for site preparation. However, they differ significantly on the costs for treatment. Treatment costs for Alternative 4 are higher because of the offsite transport and treatment of the large volumes of contaminated surface water that are expected to be generated.

SUMMARY OF THE PREFERRED ALTERNATIVE

In summary, Alternative 2 would achieve substantial risk reduction by minimizing surface water run-off and eliminating contact of surface water run-off with contaminated soils at the CIC site. Alternative 2 achieves this risk reduction more quickly and at substantially less cost than any of the other options. Additionally, the alternative does not conflict with future remedies which may be selected to address the entire site. Therefore, Alternative 2 is believed to provide the best balance of trade-offs among alternatives with respect to the evaluation criteria and is proposed by EPA as the preferred alternative. Figure 2 provides an illustrative example of this alternative as it could be implemented. Detailed discussion of the preferred alternative is found in the focused RI/FS for the surface water interim action which is part of the administrative record for the CIC Site (in the Edison Township Municipal complex).

THE COMMUNITY'S ROLE IN THE SELECTION PROCESS

EPA solicits input from the community on the cleanup methods proposed for each Superfund response action. EPA has set a public comment period from August 3 through August 24, 1989 to encourage public participation in the selection process. The comment period includes a public meeting at which EPA will present the RI/FS Report and Proposed Plan, answer questions, and accept both oral and written comments.

The public meeting for the Chemical Insecticide Corporation Site is scheduled for 7 p.m., August 10, 1989 and will be held in the auditorium of the Edison Township Municipal Complex, 100 Municipal Boulevard, in Edison, NJ.

Comments will be summarized and responses provided in the Responsiveness Summary section of the Record of Decision (ROD). The ROD is the document that presents EPA's final selection for cleanup. Written comments should be sent to:

Jonathan Josepha
Remedial Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza, Room 747
New York, New York 10278

THE WORD NOTEBOOK

Specialized terms used elsewhere in this Proposed Plan are defined below.

Activated Carbon Adsorption: A wastewater treatment technology in which wastewater is contacted with activated carbon (a material similar to charcoal). Certain contaminants, such as most pesticides, will tend to adhere to the carbon, purifying the water.

Ion-Exchange: A wastewater treatment technology in which harmful ions (electrically charged particles) in the wastewater are replaced by relatively harmless ions. For example, arsenic ions in wastewater, passing through an appropriate ion exchange column, may be replaced by sodium ions, trapping the arsenic on the column and purifying the water.

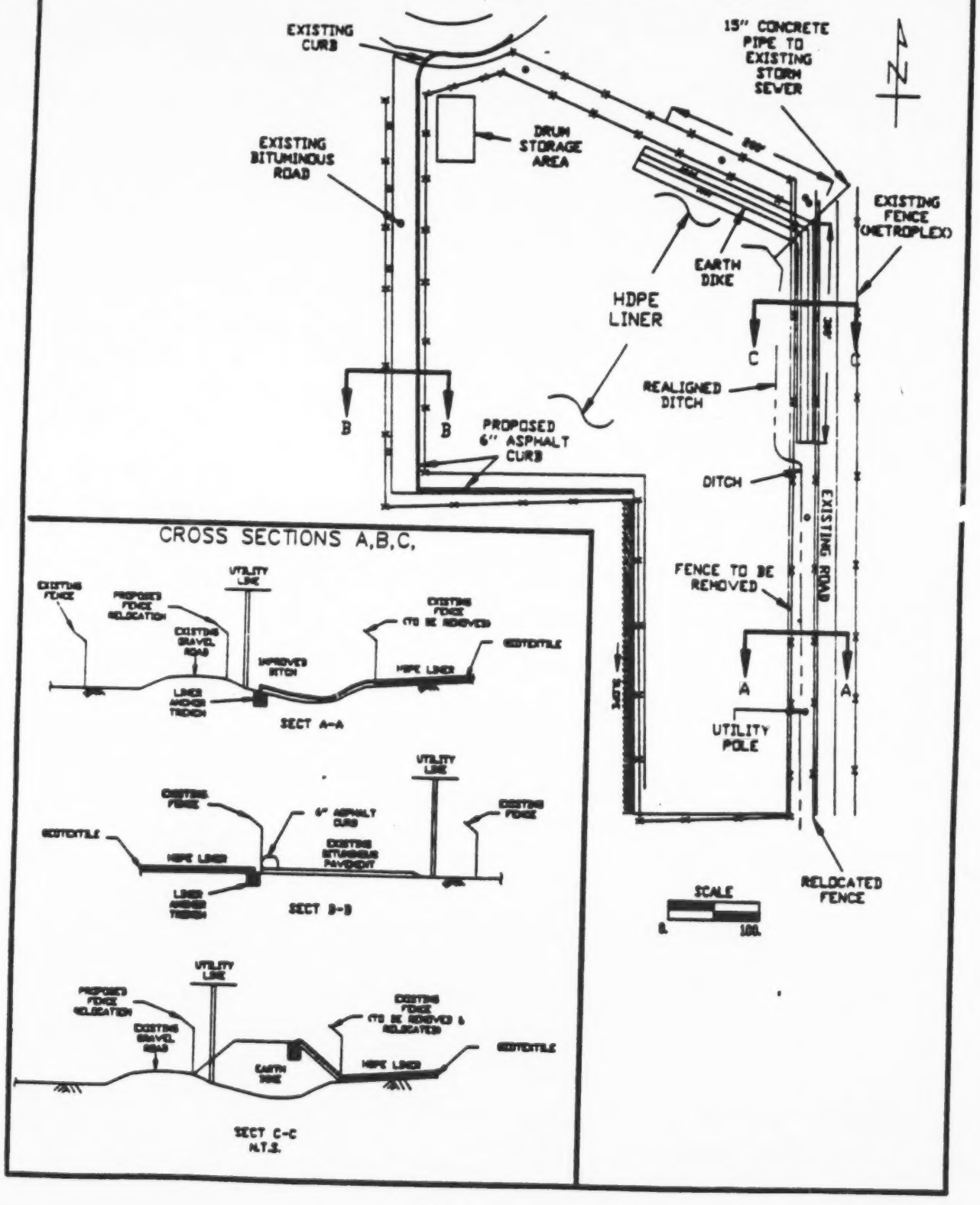
POTW: A Publicly-Owned Treatment Works. Although some POTWs treat only domestic sewage, some are also permitted to treat industrial wastewaters and other wastewaters containing hazardous substances.

Surface Water Run-off: The temporary flow of water along the surface of the ground after a precipitation event (e.g., a rainstorm). Run-off flows follow the path of least resistance, moving from higher ground to lower ground, carrying materials picked up from soils contacted.

Surficial Cap: A cover placed over the ground surface. Common capping materials include clay and plastics. Purposes of a cap may be to contain waste below the cap and to keep precipitation from contacting the waste and spreading it.

FIGURE 2

CHEMICAL INSECTICIDE CORPORATION
PREFERRED ALTERNATIVE: ILLUSTRATIVE EXAMPLE OF SITE PLAN



APPENDIX B
SIGN-IN SHEETS
The following sign-in sheets are from the Public Information held August 10, 1989 at 7:00 pm. in the Edison Municipal Complex Edison, New Jersey

P.2

AUG 11 '89 14:45 U.S EPA 26 FED.PLAZA

UNITED STATES PROTECTION AGENCY
REGION II
PUBLIC MEETING
FOR
CHEMICAL INSECTICIDE CORPORATION SUPERFUND SITE

August 10, 1989
ATTENDEES

(Please Print)

NAME	STREET	CITY	ZIP	PHONE	REPRESENTING	MAILING LIST
Betty KIRTMAN	14 Poets Lane	Metuchen	08840	494-1432	Metuchen	✓
J. McGEE	169 WHITMAN AVE	EDISON	08817	291-1432	SELF	✓
Jane Swanson	19 Butler Rd	Edison	08820	561-5304	SELF	
Sidney A. Frankel	2 Roger Rd.	Edison	08817	985-6428	SELF	✓
Barbara Clancy	1064 Somerset St	Somerset	08873	247-5000	Self	
Margaret Clancy	"	"	"	"	"	
D. Coy	1 Stephen Ct	South Plainfield	07079	757-6286	"	✓
R. LEBO	1980 Hampton Edison	Edison	08817	548-1467	SELF	YES
P. Nobel/Nobel	43 Heathcote	Edison	08817	287-2374	self & wife	yes
M GALLOTTO	THE NEWS TRIBUNE		442-0400			
Bill Gilbert	8 Kati Lane	Metuchen	~~494-5690~~ 08840	494-5690	Metuchen Environ.	no

UNITED STATES PROTECTION AGENCY
REGION II
PUBLIC MEETING
FOR
CHEMICAL INSECTICIDE CORPORATION SUPERFUND SITE

P.3

August 10, 1985
ATTENDEES

(Please Print)

NAME	STREET	CITY	ZIP	PHONE	REPRESENTING	MAILING LIST
M. Rusinko	26 Heathcote	Edison	0881?		Heathcote Ave.	✓
M. Clarke	24 Heathcote Ave.	Edison	0881?		" "	✓
R BROOKS	1 WYNN RD	EDISON	08817		WYNN RD	✓
D. Brooks	1 Wynn Rd	Edison	0881?		Wynn Rd	
D Pollitman	34 Heathcote Ave	Edison	0881?		Heathcote Ave	
J. DALTON	29 Heathcote Ave	EDISON	0881?		" "	✓
M.E. Jenkins	301 Alpine Trail	Neptune	07753		I'm a former resident of Metuchen	✓
T URBACH	49 HEATHCOTE Ave	Edison	0881?		HEATHCOTE AVE	—
JOEL JOSEPH	METROPLEX DIST	EDISON	08817	549-5300	METROPLEX DIST	
Carol Berman	271 Newbrunswick	Metuchen	08840	548-6616		✓
Matthew Reilly	3 Terrill Rd	Edison	0881?			✓
M. CHONKA	6 DARREL CT.	EDISON	08817		DARREL CT	✓
K. Conroy	1 Stoffel St	So. Amboy	08879	727-6286	WORKS AT MUNERS	

AUG 11 '89 14:46 U.S EPA 26 FED.PLAZA

APPENDIX C
INFORMATION REPOSITORIES

REPOSITORIES FOR THE CHEMICAL INSECTICIDE CORPORATION SITE

Edison Township Municipal Complex
100 Municipal Boulevard
Edison, New Jersey 08817
(201) 287-0900
Mon-Fri: 9 a.m. to 4 p.m.

U.S. Environmental Protection Agency
26 Federal Plaza
New York, New York 10278
(212)264-8676
Mon-Fri: 9 a.m. to 4 p.m.

The Edison Library
340 Plainfield Avenue
Edison, New Jersey 08817
(201) 287-2298
Mon-Fri: 9 a.m. to 9 p.m.
Sat: 9 a.m. to 5 p.m.

The Metuchen Library
480 Middlesex Avenue
Metuchen, New Jersey 08840
(201) 632-8526
Mon., Tues., and Thurs: 10 a.m. to 9 p.m.
Weds., Fri., and Sat: 10 a.m. to 5 p.m.

APPENDIX D

LIST OF LABORATORIES USED TO ANALYZE SAMPLES FROM THE CIC SITE

CHEMICAL INSECTICIDE CORPORATION
RI/FS FIELD INVESTIGATION
ANALYTICAL LABORATORIES USED

	LABORATORY NAME	CITY	STATE	ZIP CODE
	Accu-Labs Research	Wheat Ridge	CO	80033
	Acurex Corporation	Mountain View	CA	94042
	Alliance Technologies	Bedford	MA	01730
*	Amer. Analy. & Tech	Tulsa	OK	74146
	Analytical Resources	Seattle	WA	98109
*	Aquatech, Inc.	So. Burlington	VT	05403
*	Associated Labs Inc	Orange	CA	92668
*	CSMRI Analytical Inc.	Golden	CO	80403
*	California Water Labs	Madesto	CA	95351
*	Cambridge Analytical	Boston	MA	02215
*	Centec Analytical	Salem	VA	24153
*	Century Laboratories	Thorofare	NJ	08086
	Century Refining Co.	Brighton	CO	80601
	Century Testing Labs	Bend	OR	97709
*	ChemTech Consulting	New York	NY	10014
	Clayton Env. Consultant	Novi	MI	48050
*	CompuChem Laboratories	RTP	NC	27709
	EA Engineering Sci&Tech	Sparks	MD	21152
	EMS Laboratories	Lakewood	NJ	08701
	ENESCO/Cal. Analytical	W. Sacramento	CA	95691
*	ENSECO/Rocky Mountain	Arvada	CO	80002
*	ETC/Toxicon Inc.	Baton Rouge	LA	70814
	Eagle Picher	Miami	OK	74354
*	Ecology & Environment	Buffalo	NY	14225
	Env. Control Technology	Ann Arbor	MI	48108
*	Env. Industrial Rsrch.	St. Rose	LA	70087
*	Env. Monitoring & Serv.	Camarillo	CA	93010
*	Env. Protection Systems	Pensacola	FL	32506
*	Env. Science & Engnring	Gainesville	FL	32602
*	Env. Testing & Cert.	Edison	NJ	08818
*	Galson Technical Serv.	East Syracuse	NY	13057
	GeoChem Research Inc.	Houston	TX	77084
*	Gulf South Rsrch Inst.	New Orleans	LA	70126
	Hazelton Lab Inc.	Madison	WI	53707
*	Hittman-Ebasco Assoc.	Columbia	MD	21045
*	IT Analytical Services	Export	PA	15632
*	IT Corporation	Cerritos	CA	90701
*	JTC Env. Consultants	Rockville	MD	20850
	Kansas City Scientific	Kansas City	MO	64110
	Kemron	Baton Rouge	LA	70810
*	Laucks Testing Labs Inc	Seattle	WA	98108
	Mack Laboratories	Pittsburgh	PA	15210
	Martin Marietta	Columbia	MD	21045
	MetaTrace Inc.	Earth City	MO	63045
	Northern Labs & Engring	Valparaiso	IN	46383
	Pacific Analytical Inc.	Carlsbad	CA	92008
	Post Buckley S & J	Orlando	FL	32805
	RF Weston Inc.	Lionsville	PA	19380

CHEMICAL INSECTICIDE CORPORATION
RI/FS FIELD INVESTIGATION
ANALYTICAL LABORATORIES USED

	LABORATORY NAME	CITY	STATE	ZIP CODE
	RF Weston Inc.	Stockton	CA	95210
	Radian Corporation	Sacramento	CA	95827
	Resource Analysts Inc.	Hampton Falls	NH	03842
	S-Cubed	San Diego	CA	92121
	SPL Inc.	Houston	TX	77054
*	Science Appl. Int'l.	La Jolla	CA	92038
*	SouthWest Labs of OK.	Tulsa	OK	74146
	SouthWest Research Inst	San Antonio	TX	78284
*	Spectrix-Div. of K.E.R.	Houston	TX	77063
*	TMA/NORCAL	Richmond	CA	94804
	TMS Analytical Services	Indianapolis	IN	46268
	Thermo Analytical Inc.	Ann Arbor	MI	48104
*	Triangle Laboratories	RTP	NC	27709
*	US Testing Co. Inc.	Hoboken	NJ	07030
*	University of Iowa	Iowa City	IA	52242
*	Versar Inc.	Springfield	VA	22151
	West Coast Analytical	Santa Fe Spring	CA	90670
*	Western Research Inst.	Laramie	WY	82071
	Weyerhauser Company	Tacoma	WA	98477
	Wilson Laboratories	Salina	KS	67402
*	York Laboratories	Monroe	CT	06468